Plant Engineering®

FIVE YEAR INDEX

1972 - 1968

Plant Engineering/Barrington, Illinois 60010

How To Use Your Five-Year Index

PLANT ENGINEERING'S Information Retrieval System is based on a four-digit code scheme. The first two digits—from 05 to 95—are primary classifications as shown on the facing page. There are 19 primary classifications covering subjects of direct interest to plant engineers.

On the following two pages, each of the 19 primary classifications are subdivided into secondary code classifications identified by two additional digits. (These four-digit code numbers will be found at the inside bottom edge of every feature article page published in PLANT ENGINEERING.) Following the four-digit listing, you will find an alphabetical listing by subject showing the four-digit code number and page number in the index.

Information can be retrieved in a number of ways. For example, let's say that you are considering a new construction project and want to review all PLANT ENGINEERING-published material on this subject. In the two-digit listing on the facing page, note that "5000—Construction" starts on page 12. To obtain specific problem-solving information, you may use either the four-digit listings or the alphabetical index. Assume the problem is a leaking roof. In the four-digit listing under "Construction," you will find the secondary classification "5015—Roof Decks and Roofing" and a reference to page 13. In the alphabetical index, the information will be found under "Roof Decks and Roofing-5015" page 13.

If you are searching for a specific article but can remember only the author's name or the company, refer to the alphabetical listings of Authors and Companies arranged by years on the back pages.

IMPORTANT NOTICE –

Reader Service Information

PLANT ENGINEERING will continue its policy of honoring requests for complimentary copies of feature articles from *current issues.* These may be requested by circling the number found at the end of the article on the reader service card. These cards are valid for 60 days from issue date. *Articles appearing in issues over 60 days* old may be ordered at a cost of 25 cents per article to cover the cost of retrieval and handling service. These copies may be in the form of tear sheets, reprints, or Xerox copies, depending upon available supply. Be sure to identify each article requested by title, issue date, and page number, or make a copy of the index page and circle the articles desired. Send your request along with a check to: Editorial Reprint Department, PLANT ENGINEERING, 1301 South Grove Avenue, Barrington, IL 60010.

Primary Subject Index Code (two digits)

Page	
6	0500—Distribution and Application of Electric Power
7	1000—Illumination
7	1500—Communications and Alarms
8	2000—Fluid Power and Mechanical Power Transmission
8	2500—Air Conditioning, Ventilation and Refrigeration
9	3000—Process and Space Heating
10	3500—Piping, Valves and Fittings
10	4000—Pumps and Compressors, Prime Movers
11	4500—Material Handling
12	5000—Construction
14	5500—Equipment, Maintenance and Housekeeping
15	6000—Tools and Welding
16	6500—Paints and Protective Coatings
16	7000—Fire Protection, Safety, Sanitation and Personnel Services
17	7500—Pollution Control
19	8000—Lubrication
19	8500—Instruments and Controls
20	9000—General
22	Company Index
37	Author Index

Secondary Subject Index Code (four digits)

Code No.		Page No.
0500	**DISTRIBTUION AND APPLICATION OF ELECTRIC POWER**	**6**
0501	Electrical Systems	6
0510	Substation Equipment	6
0520	Protective Devices	6
0530	Distribution Systems	6
0540	Motors	6
0550	Electrical Control (electric power only)	6
0560	Conversion Equipment	7
0570	Batteries & Chargers	*
0580	Wiring Devices	7
0599	Miscellaneous	7
1000	**ILLUMINATION**	**7**
1001	Lighting Design	7
1010	Fixtures	*
1020	Lamps	7
1040	Accessory Equipment	7
1050	Plant Lighting	7
1060	Office Lighting	7
1070	Outdoor Lighting	7
1080	Lighting Maintenance	7
1099	Miscellaneous	*
1500	**COMMUNICATIONS AND ALARMS**	**7**
1501	General Systems	7
1510	Clock & Call Systems (signal systems)	7
1520	Intercommunication & Paging Systems (wired voice systems)	8
1530	Radio Systems (wireless voice systems)	8
1540	Closed Circuit Television Systems	8
1599	Miscellaneous	*
2000	**FLUID POWER & MECHANICAL POWER TRANSMISSION**	**8**
2001	General Systems	8
2010	Gear Drives	8
2020	Variable Speed Drives (non-motorized), Clutches & Brakes	8
2030	Chain Drives	8
2040	Belt Drives	8
2050	Flexible Couplings & Shafting	8
2060	Bearings & Pillow Blocks	8
2065	Bearings & Shaft Seals	8
2070	Hydraulic Systems	8
2080	Pneumatic Systems	8
2099	Miscellaneous	*
2500	**AIR CONDITIONING, VENTILATION & REFRIGERATION**	**8**
2501	General Systems	8
2510	Air Conditioning	9
2520	Ventilators	9
2530	Air Handling	9
2540	Filters	9
2550	Cooling Towers	9
2560	Humidifcation & Dehumidifiers	*
2599	Miscellaneous	*
3000	**PROCESS AND SPACE HEATING**	**9**
3001	General Systems	9
3010	Boilers & Accessories	9
3020	Heating Systems & Burners	9
3025	Industrial Fuels & Additives	9
3030	Heaters (except water, see 3010, and process, see 3040)	10
3040	Process Air Heating	*
3050	Process Liquid Heating & Cooling	10
3060	Insulation	10
3099	Miscellaneous	*
3500	**PIPING, VALVES & FITTINGS**	**10**
3501	General Systems	10
3510	Piping	10
3520	Valves	10
3530	Fittings & Couplings	10
3540	Flexible Hose	10
3550	Pipe Joints	*
3560	Plumbing Fixtures	*
3570	Cleaning Equipment	*
3580	Filters, Strainers, Traps, Floats	10
3599	Miscellaneous	10
4000	**PUMPS & COMPRESSORS, PRIME MOVERS**	**10**
4001	General Systems	*

Code No.	Page No.
4010–Pumps	10
4020–Compressors	11
4030–Compressed Air Accessories	11
4040–Prime Movers	11
4099–Miscellaneous	*
4500–MATERIAL HANDLING	**11**
4501–Material Handling Systems	11
4510–Conveyors and Conveyor Systems (including tow cart systems)	11
4515–Conveyor Belts & Idlers	12
4520–Cranes & Storage Retrieval & Accessories	12
4525–Hoists	12
4530–Elevators	12
4540–Lifting & Transferring Devices	12
4545–Industrial Trucks & Accessories	12
4550–Hoppers, Dumpers & Trailers	12
4555–Tractors & Shovels	*
4560–Personnel Carriers	*
4565–Casters, Wheels & Tires	*
4570–Dock Equipment	12
4575–Packaging Equipment	12
4580–Palletizers	*
4585–Storage, Warehousing, Pallets, Containers, Racks	12
4590–Rigging Equipment, Below the Hook Devices	12
4599–Miscellaneous	12
5000–CONSTRUCTION	**12**
5001–General	12
5002–Project Planning	12
5003–Plant & Office Layout	13
5004–Project Management	13
5005–Structural Systems	13
5006–Structural Engineering	13
5007–Plant Expansion and Modernization	13
5008–Construction Materials	13
5009–Foundations	13
5010–Exterior Walls	13
5015–Roof Decks, Roofing	13
5020–Sash & Glazing	14
5025–Floors & Flooring	14
5030–Interior Walls & Partitions	14
5035–Building Insulation	14
5040–Doors & Operators	14
5050–Railroad Equipment	14
5055–Landscaping & Grounds	14
5070–Roads & Parking Lots	14
5099–Miscellaneous	14
5500–EQUIPMENT, MAINTENANCE & HOUSEKEEPING	**14**
5501–General Systems	14
5505–Process Equipment	14
5510–Shop Layout & Equipment	14
5515–Shop Furniture	*
5520–Repair & Stores	14
5530–Installation Accessories	14
5533–Maintenance Controls	14
5540–Cleaning Equipment	*
5543–Preventive Maintenance	15
5550–Metals and Materials	*
5553–Training	15
5580–Housekeeping	15
5590–Cleaning Materials	*
5599–Miscellaneous	*
6000–TOOLS & WELDING	**15**
6001–General Systems	*
6010–Fasteners & Adhesives	15
6020–Tools, Expendable	*
6030–Tools, Hand	*
6040–Tools, Powered, Portable	16
6050–Welding Equipment	16
6060–Soldering, Brazing	16
6099–Miscellaneous	*
6500–PAINTS AND PROTECTIVE COATINGS	**16**
6501–General Systems	16
6502–Corrosion	16
6503–Painting Projects	16
6510–Preparation	16
6520–Application	16
6530–Paints & Coatings	16
6550–Cathodic Protection	*
6599–Miscellaneous	*
7000–FIRE PROTECTION, SAFETY, SANITATION & PERSONNEL SERVICES	**16**
7001–General Systems	16
7010–Lockers	17
7020–Fire	17
7030–Food Services	*
7040–Safety	17
7045–Medical & Health	17
7050–Sanitation	*
7060–Security	17
7070–Cans & Receptacles	*
7099–Miscellaneous	*
7500–POLLUTION CONTROL	**17**
7501–General Systems	17
7510–Influent Treatment	17
7520–Influent Waste	17
7530–Solid Waste Destruction	18
7540–Solid Waste Handling	18
7545–Solid Waste Reclamation	18
7550–Air	18
7560–Noise	18
7570–Noise Measurement	18
7599–Miscellaneous	*
8000–LUBRICATION	**19**
8001–General Systems	19
8010–Lubricants	19
8020–Lubrication Equipment	19
8030–Hydraulic Fluids	19
8040–Cutting Oils & Coolants	19
8099–Miscellaneous	*
8500–INSTRUMENTS & CONTROLS	**19**
8501–General Systems	19
8520–Instruments (electrical & mechanical)	19
8530–Scales	19
8540–Heating & Air Conditioning Controls	19
8550–Process Controls	19
8560–Logic Controls	19
8599–Miscellaneous	*
9000–GENERAL	**20**
9001–General Systems	20
9003–Editorial Comments	20
9005–Plant Engineering Organization & Cover Stories	20
9007–Legal	21
9015–Forms, Control & Filing	21
9020–Data Processing & Computers	21
9025–Conferences & Shows	21
9040–Supplies	21
9045–Drafting	21
9050–Reproduction Equipment	*
9099–Miscellaneous	21

*No articles in this index

ALPHABETICAL INDEX

	Code No.	Page No.
A		
Additives, Fuel	3025	9
Adhesives	6010	15
Air Compressors	4020	11
Air Conditioning	2510	9
Air Conitioning Controls	8540	19
Air Handling	2530	9
Air Heaters, Makeup	3030	10
Air Pollution	7550	18
Alarm Systems	1500	7
Annunciators	1510	7
B		
Ballasts	1040	7
Bearings	2060	8
Bearing Seals	2065	8
Below the Hook Devices	4590	12
Belt Conveyors	4515	12
Belt Drives	2040	8
Bins	4585	12
Boilers & Accessories	3010	9
Brakes	2020	8
Brazing	6060	16
Building Insulation	5035	14
Burners	3020	9
C		
Cable & Wire	0530	6
Call Systems (signal systems)	1510	7
Capacitors	0510	6
Chain Drives	2030	8
Chains and Slings	4590	12
Circuit Breakers	0520	6
Clock Systems (signal systems)	1510	7
Closed Circuit Television Systems	1540	8
Clutches	2020	8
Coatings	6530	16
Communication Systems	1500	7
Compressed Air Accessories	4030	11
Compressors, Air	4020	11
Computers	9020	21
Conductors, Electrical	0530	6
Conduit & Fittings	0530	6
Conferences	9025	21
Construction	5000	12
Construction Materials	5008	13
Containers	4585	12
Control, Electrical	0550	6
Conversion Equipment	0560	7
Conveyors	4510	11
Conveyor Belts	4515	12
Conveyor Idlers	4515	12
Coolants, Cutting	8040	19
Cooling Towers	2550	9
Corrosion Control	6502	16
Couplings, Pipe	3530	10
Couplings, Shaft	2050	8
Cranes	4520	12
Cutting Oils	8040	19
D		
Data Processing	9020	21
Distribution Systems	0530	6
Dock Equipment	4570	12
Doors	5040	14
Drafting	9045	21
Dumpers	4550	12
E		
Editorial Comments	9003	20
Effluent Waste Treatment	7520	17
Electrical Control (electric power only)	0550	6
Electrical Systems	0501	6
Elevators	4530	12
Emergency Generator Sets	0560	7
Exterior Walls	5010	13
Extinguishers, Fire	7020	17
F		
Fabrication Services	9505	21
Fans, Blowers and Ventilators	2520	9
Fasteners	6010	15
File Systems	9015	21
Filters, Air	2540	9
Filters, Liquid	3580	10
Fire Equipment	7020	17
Fittings	3530	10
Flexible Couplings	2050	8
Flexible Hose	3540	10
Floors	5025	14
Fluid Power Systems	2070	8
Forms, Control	9015	21
Forms, Filing	9015	21
Foundations	5009	13
Fuses	0520	6
G		
Gear Drives	2010	8
Generators, Emergency	0560	7
Glazing	5020	14
Grounds Maintenance	5055	14
H		
Health	7045	17
Heat Recovery	3030	10
Heaters (except water, see 3030, and process, see 3040)	3030	10
Heating Controls	8540	19
Heating Systems	3020	9
Hoists	4525	12
Hoppers	4550	12
Housekeeping	5580	15
Hydraulic Fluids	8030	19
Hydraulic Systems	2070	8
I		
Illumination	1000	7
Incinerators	7530	18
Industrial Fuels	3025	9
Industrial Trucks & Accessories	4545	12
Influent Water Treatment	7510	17
Installation Accessories	5530	14
Instruments (electrical & mechanical)	8520	19
Insulation, Building	5035	14
Insulation (Pipe, Tank and Duct)	3060	10
Intercommunication Systems (wired voice systems)	1520	8
L		
Ladders	7040	17
Lamps	1020	7
Landscaping	5055	14
Legal	9007	21
Lifting Devices	4540	12
Lifting Equipment	4590	12
Lighting Accessory Equipment	1040	7
Lighting Design	1001	7
Lighting Maintenance	1080	7
Lighting, Outdoor	1070	7
Lighting, Plant	1050	7
Lightning Protection	7020	17

	Code No.	Page No.
Lockers	7010	17
Logic Controls	8560	19
LPG Equipment	3025	9
Lubricants	8010	19
Lubrication Equipment	8020	19
M		
Maintenance Controls	5533	14
Maintenance Equipment	5500	14
Maintenance, Grounds	5055	14
Makeup Air Heaters	3030	10
Material Handling Systems	4501	11
Mechanical Power Transmission	2000	8
Medical	7045	17
Metallizing Equipment	6060	16
Motors	0540	6
Motor Control	0550	6
N		
Noise Control	7560	18
Noise Measurement	7570	18
O		
Odor Control	7550	18
Office Layout	5003	13
Office Lighting	1060	7
Oils	8010	19
Operators, Door	5040	14
Organization, Plant Engineering	9005	20
OSHA	7040	17
Outdoor Lighting	1070	7
P		
Packaging Equipment	4575	12
Paging Systems (wired voice systems)	1520	8
Paints	6530	16
Painting, Application	6520	16
Painting, Preparation	6520	16
Painting Projects	6503	16
Pallets	4585	12
Panelboards, Power & Light	0520	6
Parking Lots	5070	14
Partitions	5030	14
Personnel Protective Devices	0520	6
Pillow Blocks	2060	8
Piping	3510	10
Plant Engineering Organization	9005	20
Plant Expansion	5007	13
Plant Layout	5003	13
Plant Lighting	1050	7
Plant Modernization	5007	13
Pneumatic Systems	2080	8
Pollution Control	7500	17
Portable Generator Sets	0560	7
Power, Electrical	0500	6
Power Factor Correction	0510	6
Preventive Maintenance	5543	15
Prime Movers	4040	11
Process Controls	8550	19
Process Liquid Cooling	3050	10
Process Liquid Heating	3050	10
Project Management	5004	13
Project Planning	5002	12
Protective Coatings	6500	16
Protective Devices	0520	6
Protective Devices, Personnel	0520	6
Pumps	4010	10
R		
Racks	4585	12
Radio Systems (wireless voice systems)	1530	8
Railroad Equipment	5050	14
Rectifiers	0560	7
Repair and Rebuilding	5520	14
Rigging Equipment	4590	12
Roads	5070	14
Roof Decks	5015	13
Roofing	5015	13
S		
Safety Equipment	7040	17
Sash	5020	14
Scaffolding	7040	17
Scales	8530	19
Scrubbers, Air	7550	18
Seals, Shaft & Bearing	2065	8
Security	7060	17
Shafting	2050	8
Shaft Seals	2065	8
Shop Equipment	5510	14
Shop Layout	5510	14
Shows	9025	21
Slings and Chains	4590	12
Soldering	6060	16
Solid Waste Destruction	7530	18
Solid Waste Handling	7040	18
Solid Waste Reclamation	7545	18
Space Heating	3000	9
Sprinkler Systems, Fire	7020	17
Storage	4580	12
Storage Retrieval & Accessories	4520	12
Stores	5520	14
Strainers	3580	10
Structural Engineering	5006	13
Structural Systems	5005	13
Substation Equipment	0510	6
Supplies, Office	9040	21
Switchgear	0520	6
T		
Tanks	4585	12
Telephone Systems, Private	1520	8
Television, Closed Circuit	1540	8
Tools, Portable	6040	16
Trailers	4550	12
Training	5553	15
Transferring Devices	4540	12
Transformers, Control	0550	6
Transformers, Power	0510	6
Traps	3580	10
Tubing	3510	10
V		
Vacuum Pumps	4020	11
Valves	3520	10
Variable Speed Drives (Motorized)	0540	6
Variable Speed Drives (Non-motorized)	2020	8
Ventilators	2520	9
Voltage Regulators	0510	6
W		
Walls	5030	14
Warehousing	4585	12
Washroom, Equipment	7050	17
Waste Heat Recovery	3030	10
Water Treatment, Influent	7510	17
Welding Equipment	6050	16
Wire & Cable	0530	6
Wiring Devices	0580	7

Numerical Code Index 1972 - 1968

	Issue Date	Page No.
0500–DISTRIBUTION AND APPLICATION OF ELECTRIC POWER		
0501–Electrical Systems		
Beating Those Power Demand Charges	Nov 11, 1971	88
Why Not a "One Book" National Electrical Code?	Nov 27, 1970	64
Operation/Maintenance Procedures For Medium, High Voltage Systems	Sept 3, 1970	68
Proper Electrical Nameplates	Jan 8, 1970	62
Electrimagination	May 15, 1969	65
You and Your Electric Bill	Apr 17, 1969	128
Maintains Precise Power Conditions For Computer Facility	Apr 3, 1969	50
'People Protectors' Guard Against Electric Shock	Nov 14, 1968	94
Recognizing and Controlling Low Voltage Hazards	Aug 8, 1968	92
How and Why Low Voltage Kills	Feb 8, 1968	101
0510–Substation Equipment		
Cutting Costs With Power Capacitors	Feb 24, 1972	55
Sizing Transformers for Motor Loads	Jan 13, 1972	143
Solved: The Case of the Capricious CT's	Sept 16, 1971	110
Determining Amperes Per Kilowatt At Given Power Factor	Feb 4, 1971	36
Assessing the Effects of Poor Power Factor	Apr 30, 1970	57
'No Trig' Solution to Power Factor Problems	Apr 16, 1970	102
Dry-Type Single Phase Transformers: Versatile Tools for Special Applications	Feb 19, 1970	80
Should You Buy Main Power Transformers?	July 10, 1969	60
Selecting Transformers for Secondary Unit Substations	Apr 4, 1968	78
Power Factor Study? Do It the Easy Way	Mar 21, 1968	72
Protect Incoming Substation Lines	Jan 11, 1968	86
Selecting Low Voltage Breakers	May 2, 1968	96
0520–Protective Devices		
Surge Protection for Rotating Electrical Equipment	Oct 19, 1972	86
Surge Protection for Rotating Electrical Equipment	Sept 7, 1972	92
Selecting and Coordinating Electrical Trip Devices	July 27, 1972	58
Low Voltage Switchgear	Dec 23, 1971	35
Coordinating Electrical Protection	May 14, 1970	121
Proper Application and Maintenance of Protective Electrical Devices	Mar 19, 1970	70
Understanding and Applying Molded Case Circuit Breakers. Part II	Dec 11, 1969	66
Understanding and Applying Molded Case Circuit Breakers. Part I	Nov 27, 1969	50
Do's and Don'ts of Plant Protective Relay Maintenance	Sept 18, 1969	62
Understanding Fuse Classifications	Oct 17, 1968	86
0530–Distribution Systems		
Determining Conduit Size for Conductor Combination	Nov 16, 1972	118
Allowable Ampacities of Insulated Aluminum Conductors	July 13, 1972	80
Determining Short Circuit Capability of Insulated Conductors	Jun 1, 1972	58
Terminating Aluminum Conductors	Mar 23, 1972	101
Innovation in Medium-Voltage Cable	Jun 10, 1971	98
Put Computer to Work for You in Electrical Distribution Design–Part II	Dec 10, 1970	73
Put Computer to Work for You in Electrical Distribution Design–Part I	Nov 12, 1970	70
Allowable Ampacities of Insulated Copper Conductors	Oct 29, 1970	62
Laying Down Direct Burial Cable? First Lay Down Burial Specs	Feb 5, 1970	40
Electrical Distribution at Sandia	May 1, 1969	50
Installing Aluminum Cable?	Sept 19, 1968	94
0540–Motors		
Understanding Today's Squirrel Cage Induction Motors	Dec 28, 1972	26
The PAM Motor	Nov 2, 1972	82
Electric Motor Bearings	Nov 2, 1972	78
Minimize Repair Downtime With Replaceable Motor Cores	Aug 24, 1972	68
Fine-Tuning D-C Commutation ... by the black band method	May 4, 1972	80
Troubleshooting Electric Disc Brakes	Feb 10, 1972	78
Overload Protection of Three-Phase Motors	Oct 14, 1971	98
Operating Two Mechanically Connected Motors	Sept 30, 1971	42
Stop Those Motor Burnouts	Sept 2, 1971	66
You and the Motor Repair Shop–Part II	July 22, 1971	70
You and the Motor Repair Shop–Part I	May 27, 1971	58
Guidelines for Selecting Synchronous Motors–Part II	Apr 29, 1971	48
Guidelines for Selecting Synchronous Motors–Part I	Apr 15, 1971	67
Priority System Replaces 'Across the Board' Motor Maintenance Program	Apr 2, 1970	38
Motor Coil Failed–Rewind or Remove?	Jan 22, 1970	78
Induction or Synchronous Motor? Selection Guide Helps Choose	Sept 4, 1969	90
Adjustable Frequency Control Simplifies Synchronization	July 24, 1969	66
Survey Report on Why Electric Motors Fail	Mar 20, 1969	54
Application and Control of Synchronous Motors	Mar 6, 1969	94
Understanding Motor Temperature Ratings	Feb 6, 1969	68
Specifying Motors–Standards vs Specials	Jun 27, 1968	68
0550–Electrical Control (electric power only)		
Foolproof Motor Burnout Protection	Oct 5, 1972	83
Retrofitting Motor Starters for That Third Overload Protector	Sept 21, 1972	98
Minimizing Electrical Interference in N/C Equipment	Aug 24, 1972	64
Limit Switches ... installation and maintenance	Jun 29, 1972	62
Limit Switches ... cam design	Jun 15, 1972	106
LEDs–New Light for An Old Control Concept	May 18, 1972	86
Limit Switches ... enclosures and contact arrangements	Apr 20, 1972	84
Limit Switches ... selecting operating lever	Apr 6, 1972	96
Limit Switches ... types of actuators	Feb 10, 1972	82
Limit Switches ... types and terminology	Jan 27, 1972	32
Maintaining Motor Control Centers	Sept 16, 1971	127
Installing Motor Control Centers	Aug 19, 1971	51
Specifying Motor Control Centers–Part II	Jun 24, 1971	49
Specifying Motor Control Centers–Part I	May 13, 1971	85
Applying Thermal Overload Relays–Part III	Sept 17, 1970	114
Part II	Aug 20, 1970	70
Part I	July 9, 1970	56
Photocells Replace Relays ... Minimize Control Maintenance	Jun 11, 1970	106

	Issue Date	Page No.
Oversize Your Heating Contractors For Longer Life	Mar 5, 1970	80
How To Select Reduced Voltage Starters	Aug 21, 1969	58
The Effect of Solid State On Plant Engineering Philosophy	Jun 12, 1969	54
How Thyristor Crane Control Operates	Oct 31, 1968	93
Calculating RC For Relay Time Delay	Oct 3, 1968	58
Power Press Electrical Controls–Part V	Sept 5, 1968	86
Power Press Clutch Controls–Part IV	July 11, 1968	78
Power Press Electrical Controls–Part III	Jun 13, 1968	110
D-C Actuating Mechanisms Improve Large Starter Operation	May 16, 1968	97
Power Press Electrical Controls–Part II	May 16, 1968	72
New Relay Designed for Accessibility and Reliability	May 2, 1968	90
Power Press Electrical Controls–Part I	Apr 18, 1968	103
Photo-Conductive Cell Solves Industrial Control Problems	Apr 4, 1968	97
Troubleshooting Industrial Controls–Part X	Feb 22, 1968	90
Part IX	Jan 25, 1968	102
0560–Conversion Equipment		
Updating a Standby Power System	Nov 30, 1972	82
Standby Generator Specification Chart	Feb 18, 1971	65
Preventive Maintenance of Diesel Electric Generators–Part II	Jan 21, 1971	84
Providing Reliable Power for Computer Systems	Jan 7, 1971	38
Preventive Maintenance of Diesel Electric Generator Sets–Part I	Dec 24, 1970	58
Power Blackout Prompts Review of Emergency Power System	Oct 16, 1969	74
Controlling On-Site Generators With Static Voltage Regulators	Jan 9, 1969	56
Applying Static Inverters	Dec 12, 1968	82
Now, Go 'All Electric' With Solid State Ignitron	Mar 7, 1968	110
0580–Wiring Devices		
Selecting Locking Plugs and Receptacles	Nov 26, 1971	55
Controlling Corrosion of Electrical Enclosures	Jun 25, 1970	87
New Standards For Plugs and Receptacles Announced by NEMA	May 30, 1968	51
0599–Miscellaneous		
Suppressing Industrial RF Radiation to Comply With FCC	Oct 1, 1970	36
1000–ILLUMINATION		
1001–Lighting Design		
High Frequency Lighting–Status Report	Nov 16, 1972	115
Minimizing Veiling Reflections in Lighting Installations	Jun 1, 1972	62
Zonal Cavity Lighting Calculations Aren't Hard	Aug 5, 1971	72
Does It Pay to Turn Off the Lights?	Jun 10, 1971	118
Understanding the New Language of Lighting	Jan 21, 1971	68
Determining Cavity Ratios for Zonal Cavity Lighting Calculations	Nov 27, 1970	68
Visual Comfort Probability–Latest Criterion for Evaluating Lighting Systems	Oct 29, 1970	64
How "Time-to-See" Factor Affects Lighting Requirements	Aug 6, 1970	66
Correlating Electrical and Mechanical Design In Heat-of-Light Installations	May 14, 1970	113
Effect of Lighting on Working Conditions–Part B	Aug 7, 1969	60
Part A	Feb 6, 1969	64
1020–Lamps		
Maintaining Lighting Levels	Oct 19, 1972	80
Primer on High Intensity Discharge Lamps	May 4, 1972	73
More Light With No Capital Investment	Mar 9, 1972	64
Understanding Color Rendering Properties of Industrial Lamps	Jan 22, 1970	56
1040–Accessory Equipment		
Learning To Live With Class P Ballasts	Sept 18, 1969	66
Class P Ballasts–Watch Fixture Selection, Application	Apr 17, 1969	120
Upgrade Lighting–Convert Incandescent to HID	July 11, 1968	76
Match That HID Lamp–To Which Ballast?	Apr 18, 1968	122
Why Fuse HID Ballasts?	Mar 21, 1968	88
1050–Plant Lighting		
Combination Luminaires–Auxiliary Lighting for HID Lamp Restarts	Dec 14, 1972	100
Custom Lighting Cuts Glare–Brightens Working Areas	Dec 25, 1969	42
Plant Lighting Quadrupled At Low Cost	Mar 20, 1969	59
High Bay Light Study Pointed to HPS Lamps	Oct 31, 1968	74
Lighting Revamped at Minimum Cost–Maximum Benefit	Aug 8, 1968	86
Planning High Bay Lighting? Let Computer Design It	Feb 22, 1968	85
1060–Office Lighting		
New Home of PLANT ENGINEERING Features Award-Winning Lighting Installation	May 28, 1970	44
Keeping Office Lighting Up To Date	Sept 19, 1968	90
1070–Outdoor Lighting		
Lighting the "Back 32"	Oct 2, 1969	42
Lighting Interiors of Dockside Vehicles	Jun 26, 1969	60
Luminaire Analysis Simplifies Floodlighting Design	Jun 13, 1968	90
Let's Light Up the Dock Area	Jan 25, 1968	88
1080–Lighting Maintenance		
The Economics of Spot Versus Group Relamping	July 27, 1972	62
Troubleshooting HID Lighting Systems	Nov 11, 1971	106
Shedding Light on Relamping Costs	July 22, 1971	59
For Better Plant Lighting–Break With Tradition	May 2, 1968	110
1500–COMMUNICATIONS AND ALARMS		
1501–General Systems		
Solving Communication Problems This Plant Uses Six Methods	Apr 4, 1968	64
1510–Clock & Call Systems (signal systems)		
Central Equipment Monitoring System	Sept 21, 1972	94
Display Board Registers Alarm Conditions	Mar 23, 1972	108
Fire Monitoring/Warning System	Jan 27, 1972	40
New Intrusion Detection Sensor Screens Out Nuisance Alarms	Dec 9, 1971	74
Emergency Reporting System Prints Out Trouble	Oct 14, 1971	104
Centralized Annunciator System Keeps Tabs on Isolated Equipment	Mar 18, 1971	66
Monitoring System Pinpoints Machine Maintenance Needs	Oct 15, 1970	122
Perimeter Intrusion Protection	Sept 17, 1970	112
Selecting a Fire Alarm System	Jan 23, 1969	62
Talking Annunciator Improves Monitoring Effectiveness	Sept 5, 1968	94
Handwriting Transmitters ... What They Do–Equipment Available	July 25, 1968	74
Communications System Reduces Equipment Downtime	Jun 27, 1968	74

	Issue Date	Page No.
1520–Intercommunication & Paging Systems (wired voice systems)		
The New Sound of Industry Could Be Music	Aug 19, 1971	56
Remote Dictation System Increases Engineering Efficiency	Dec 12, 1968	88
What Is Custom Sound Equalization?	Nov 14, 1968	122
Is Your Public Address System Due for a Checkup?	May 30, 1968	62
1530–Radio Systems (wireless voice systems)		
CB Radio Solves Safety Signalling Problem	Mar 19, 1970	67
1540–Closed Circuit Television Systems		
Plant Applications of Video Display Systems	Oct 17, 1968	93
CCTV Supplements Computer Operation	Mar 7, 1968	126
If You Buy CCTV Who Will Maintain It?	Feb 8, 1968	106
Plant Engineering's New Helper Video Tape Offers Wide Application	Jan 11, 1968	102
2000–FLUID POWER & MECHANICAL POWER TRANSMISSION		
2001–General Systems		
Plant Engineering MPT '70	Mar 5, 1970	51
2010–Gear Drives		
Applications of Ball Bearing Screws	Dec 28, 1972	31
Operating Characteristics of Ball Bearing Screws	Dec 14, 1972	124
Care of Worm Gear Speed Reducers	Oct 29, 1970	60
Selecting and Installing Worm Gear Speed Reducers	Oct 1, 1970	42
Extend Life of Speed Reducers By Avoiding Pitfalls	July 23, 1970	82
How To Select the RIGHT Speed Reducer	July 10, 1969	54
Tips for Selecting Worm Gear Drive Systems	Feb 20, 1969	66
2020–Variable Speed Drive (non-motorized), Clutches & Brakes		
Modular Clutch-Brake System "Softens" Conveyor Line Starts and Stops	Sept 5, 1968	92
2030–Chain Drives		
Troubleshooting Chain Drive Operating Problems	Oct 3, 1968	61
Chart Speeds Roller Chain Selection	May 2, 1968	100
2040–Belt Drives		
Calculating Tension Requirements For V-Belt Drives	Jun 15, 1972	87
To Get More Life from V-Belts–Don't Misapply, Neglect or Abuse Them	Oct 30, 1969	66
How To Control Belt Sag	Jun 26, 1969	63
Whipping the V-Belt Whipping Problem	Nov 14, 1968	104
Calculating V-Belt Lengths	July 11, 1968	82
Troubleshooting Belt Drive Problems	Jun 27, 1968	62
Get Top Performance From Your Belt Drives	May 16, 1968	84
2050–Flexible Couplings & Shafting		
Working With Flexible Shafting	Apr 20, 1972	89
Special Coupling Performance Depends Upon Proper Selection	Sept 18, 1969	56
Flexible Shafts Meet Industry's Needs	Aug 7, 1969	54
Coupling Disconnect Method Speeds Alignment	Mar 6, 1969	86
Size Tubing to Save Weight, Cost	July 25, 1968	79
Chart Simplifies Selection of Shaft Sizes	Jan 25, 1968	91
2060–Bearings & Pillow Blocks		
Sleeve Bearings: Their Composition, Geometry and Lubrication	Feb 4, 1971	42
Turntable Torque Control Responds to Bearing Friction	Oct 2, 1969	50
Six-Point Guide for Installing Fan Bearings	July 24, 1969	63
Bearings–Design and Application–Part XVII	May 15, 1969	112
Part XVI	Apr 17, 1969	134
Part XV	Nov 14, 1968	138
Part XIV	Oct 31, 1968	85
Part XIII	Sept 19, 1968	97
Part XII	Aug 8, 1968	99
Part XI	Jun 13, 1968	100
Part X	Apr 18, 1968	116
Part IX	Apr 4, 1968	68
Part VIII	Mar 21, 1968	92
Part VII	Mar 7, 1968	115
Part VI	Feb 22, 1968	102
Bearing Analysis Equipment Keeps Downtime DOWN	Feb 8, 1968	87
Bearings–Design and Application–Part V	Jan 11, 1968	96
2065–Bearings & Shaft Seals		
Basic Materials for Seals and Packings	Nov 16, 1972	120
For Best Performance–Match Seals to Application	Dec 12, 1968	80
2070–Hydraulic Systems		
Stop Overheating in Hydraulic Systems	Nov 30, 1972	64
Selection Guide–Hydrostatic Drives	Aug 10, 1972	61
Hydraulic Variable-Speed Drives	Jan 13, 1972	124
Using the Hydraulic Accumulator as a Secondary Power Source	Dec 23, 1971	46
Sizing Hydraulic Accumulators	Oct 28, 1971	47
Dual-Pressure Hydraulic Systems	Sept 2, 1971	60
Specification Guide to Industrial Hydraulic Cylinders	July 22, 1971	51
Hydrostatic Drives Depend on Controls	Dec 10, 1970	76
Determining Effective Cylinder Thrust	Nov 27, 1969	58
Air-Oil Circuits Depend on Proper Design for Stroke Speed	Nov 13, 1969	71
Air and Oil Cylinders–Choice and Care Are Key Factors	Oct 16, 1969	70
Hydraulic Reservoir Standard	Sept 4, 1969	91
Calculating Cylinder Stroke Length	Aug 7, 1969	70
Industry Needs a Comprehensive Cylinder Standard–Part B	Jun 12, 1969	66
Industry Needs a Comprehensive Cylinder Standard–Part A	May 29, 1969	58
Pneumatic/Hydraulic Cylinders	Jan 9, 1969	64
2080–Pneumatic Systems		
Getting Compressed Air in Shape	May 13, 1971	92
Getting Compressed Air in Shape	May 18, 1971	60
Getting Compressed Air in Shape	Apr 15, 1971	72
Getting Compressed Air in Shape	Apr 1, 1971	36
Proper Selection and Installation of Air Regulators	Apr 30, 1970	64
2500–AIR CONDITIONING, VENTILATION & REFRIGERATION		
2501–General Systems		
The Psychrometric Chart–Tool for Estimating Air Conditioning Heat Loads	Oct 14, 1971	108
Cooling the Human "Heat Plant"	Apr 1, 1971	33
How Air Conditioning System Can Have Efficiency Advantage	Jan 21, 1971	78
Clean Room Project–Highlights Special Features of Air System	Aug 6, 1970	62
The Comfort Conditioned Seventies	Jun 25, 1970	71
Air Conditioning Approach Gives Plant Expansion Flexibility	Apr 16, 1970	108
Old Techniques Pay Off When Building New Clean Room	May 29, 1969	54

	Issue Date	Page No.
Vertical Modules Contribute to Low Cost Clean Room Installation	Feb 20, 1969	64
Laminar Flow Complex Provides Big Volume Service	Nov 14, 1968	134
Cooling Design Benefits From Careful Load Estimating	July 25, 1968	94
Plant Heat-Treating Area Gets Cool Relief	Jan 11, 1968	107
2510–Air Conditioning		
Helical Screw Chiller Compressors	Sept 21, 1972	112
Innovation in Heat Exchange–The Working Fountain	Sept 7, 1972	77
How Absorption Chillers Function	July 27, 1972	56
Don't Overlook Roof Spray Cooling–It Can Cut Air Conditioning Costs	Jun 29, 1972	54
Cutting the Costs of Cooling	Jun 15, 1972	88
Centrifugal Chiller Compressors	Jun 1, 1972	52
Troubleshooting Reciprocating Chiller Compressors	May 18, 1972	83
Reciprocating Chiller Compressors	May 4, 1972	77
Understanding the Chiller Compressor	Apr 6, 1972	90
A Case for the Air-Cooled Condenser	Dec 9, 1971	72
Cooling Tower Economics	Nov 11, 1971	103
Specification Chart: Rooftop Heating and Cooling Units	Sept 30, 1971	31
Ammonia Compressors–Quick Way to Determine Capacity	Apr 15, 1971	78
Evaporator Performance Depends on Temperature, Pressure	Oct 15, 1970	114
Refrigerant Liquid Cooling Improves Refrigeration Economy	May 14, 1970	126
How Refrigerants and Staging Affect Compressor Performance	Jan 22, 1970	69
In a Refrigeration System: Keep Oil Where It Belongs–In the Compressor	Sept 18, 1969	60
Heat Pumping Basics of Refrigeration Systems	Mar 20, 1969	74
Determining Cooling Effect and Weight of Water Evaporated	Oct 17, 1968	96
Solved Cooling Tower Makeup Control Problems	Oct 3, 1968	68
How Scale Affects Chilling Systems	Aug 8, 1968	95
Timing Schedule Pays Off . . . Refrigeration Capacity Boosted at Two Interstate Plants	Mar 7, 1968	122
2520–Ventilators		
Finding Air Density and Velocity for Fan Testing	July 8, 1971	54
Working With Fan Performance Curves	Mar 18, 1971	62
Finding Air Temperature Rise Through Forced Draft Fans	Dec 24, 1970	49
Sizing Fan Drives	July 24, 1969	74
Watch Static Pressure–Match Fan to System	Jan 9, 1969	59
Chart Speeds Fan Selection	July 11, 1968	96
Sizing Fan Drives and Finding Air Densities	May 16, 1968	70
2530–Air Handling		
Designing a Makeup Air System–Equipment Selection	Nov 30, 1972	74
Designing a Makeup Air System	Nov 16, 1972	123
Practical Ducting Design	Nov 2, 1972	55
Practical Ducting Design	Oct 5, 1972	94
Controlling Interior Air Pollution	Feb 24, 1972	64
Planning for Comfort: Air Distribution in the Office	Jun 24, 1971	56
Check These Guidelines for Balancing an Air System	Dec 25, 1969	40
Determining Air Densities	July 10, 1969	72
Designing an Effective Industrial Duct Exhaust System	Dec 12, 1968	96
To Ventilate Right Consider the Basics	Oct 3, 1968	65
Apply Air Flow Principles To Plant Ventilation Design	July 11, 1968	86
Finding Friction Loss For Round Ducts and Rectangular Equivalents	Jan 11, 1968	99
2540–Filters		
Controlling Interior Air Pollution	Apr 20, 1972	93
Filters for Controlling Interior Air Pollution	Mar 23, 1972	92
This Filter System Gives Air Ultra-Purity Treatment	Sept 19, 1968	92
2550–Cooling Towers		
Cooling Tower Economics	Nov 11, 1971	103
3000–PROCESS AND SPACE HEATING		
3001–General Systems		
Heat Recovery Systems for Plants	Dec 28, 1972	38
	Dec 14, 1972	117
Rehabilitation Program Sharply Improves Service Operations	Sept 18, 1969	50
Solving Unsteady State Heat Conduction Problems	Aug 21, 1969	62
Calculating Heat Transfer Through Irregular Boundaries	May 15, 1969	100
Determining Heat Transfer By Steady State Conduction	Nov 28, 1968	52
3010–Boilers & Accessories		
Sizing Flash Steam Tanks	Jan 13, 1972	130
What's Available In Packaged Boilers?	Aug 5, 1971	55
Boiler Capacity Increased After Firing Conversion	Jun 11, 1970	92
Determining Stack Draft	Feb 5, 1970	50
System Approach Does TRW's Big Job for Less	Nov 27, 1969	42
On-Site Energy System Gives Mill Boilers a Steam Assist	Nov 13, 1969	74
Outdoor Incinerator Boiler Provides Steam Bonus	Oct 30, 1969	68
Package Boilers and Load-Regulated Air Compressors Cut Cost of Utilities	Feb 6, 1969	62
Sizing Hot Water Expansion Tanks	Aug 22, 1968	70
Determining Condensate Weight In Heating Pipe	Jun 27, 1968	71
Plant-Engineered Control Ends Soot Blower Problem	Jun 13, 1968	116
Study of Boiler Practices Leads to $60,000 Savings	May 2, 1968	104
Boiler Conversion Reduces Costs and Air Pollution	Mar 21, 1968	96
Relating Gas Pressures to Liquid Volume Changes	Feb 22, 1968	83
Multiple-Pump Piping System Protects Boiler Against Shock	Feb 8, 1968	97
3020–Heating Systems & Burners		
Checking Combustion Efficiency	Sept 2, 1971	69
Quick Method To Check Combustion Efficiency	May 29, 1969	76
3025–Industrial Fuels & Additives		
Propane System Permits Interruptible Rate Service	Apr 29, 1971	43
Burner Efficiency Boosted Maintenance Minimized By Circulating Fuel Oil in Storage	Apr 16, 1970	89
Standby Fuel Offers Three Cost-Saving Benefits	Jun 26, 1969	68
Two Fuel Changes Improve Boiler Operation	Mar 20, 1969	62
Preheating Fuel Oil Improves Combustion Efficiency	Oct 31, 1968	80

	Issue Date	Page No.
Tables Simplify Calculations For Interruptible Gas Rates	Apr 18, 1968	106
Reduce Fuel Costs With Standby Equipment	Jan 25, 1968	104
3030–Heaters (except water, see 3010, and process, see 3040)		
Checklist for Avoiding Steam Coil Freezeup	Feb 24, 1972	62
Don't Let the Cold Air In–Use a Doorway Heater	Sept 16, 1971	134
Recovering Waste Heat–Installing a Rotary Exchanger	May 27, 1971	62
Rotary Exchangers Transfer by Wheels	May 13, 1971	100
A New Approach to Fresh Air Heating Systems	Mar 4, 1971	103
Selecting Heat Exchangers	Feb 4, 1971	37
Keep Plant Air Pressure Positive with Makeup Air Units	Nov 12, 1970	76
Finding Capacities of Electric Duct Heating Units	Mar 5, 1970	67
Select Flow Pattern Carefully When Sizing Heat Exchangers	Oct 16, 1969	56
Fixed Tube Sheet Heat Exchangers	Oct 2, 1969	52
Air Curtains Keep Cold Outside–Where It Belongs	Jun 26, 1969	54
Sizing Heater Output and Condensate Loads	Jun 13, 1968	122
3050–Process Liquid Heating & Cooling		
Choose the Right Procedure for Efficient Heat Transfer	Apr 17, 1969	131
Plant Engineered Heating-Cooling System Prevents Vessel Shock Damage	Nov 14, 1968	102
Determining Batch Heating of Tank Contents	Mar 21, 1968	77
3060–Insulation		
Don't Create Piping Problems–Choose Correct Insulation	Aug 7, 1969	66
Vapor Barriers Protect Thermal Insulation	Nov 28, 1968	46
Selecting Pipe Insulation For Cooling Systems	Oct 17, 1968	98
3500–PIPING, VALVES & FITTINGS		
3501–General Systems		
Determining Fluid Pressure Drop	Nov 12, 1970	78
Calculating Pressure Drop for Hot Water Piping	Oct 30, 1969	63
Water-Saving Suggestions Bank on Piping Changes	Oct 2, 1969	54
Determining Speed of Gas Leakage	Apr 3, 1969	62
Shortcuts for Figuring Pipe Friction Losses	Sept 19, 1968	102
Piping Layout Revised For Paint System in Record Time	Aug 22, 1968	68
Fluid Flow Affected by Various Energy Forms	July 25, 1968	80
Liquid Nitrogen Saves Plant Space	May 2, 1968	120
Determining Hydrostatic Pressure In Pipes, Tubes and Tanks	Mar 7, 1968	99
3510–Piping		
Flow and Pressure Fundamentals For Piping Systems		
Part V	Oct 19, 1972	97
Part IV	Aug 10, 1972	75
Part III	Feb 10, 1972	72
Part II	Nov 26, 1971	52
Part I	Sept 16, 1971	130
Installing Underground Plastic Sewer and Drain Lines	Sept 30, 1971	46
Determining Constraining Force On Heated Pipe	Sept 30, 1971	44
Preventing Pump Damage From Piping Strain	Sept 2, 1971	72
Measuring and Making Angle Cuts On Fabricated Pipe Bends	Jun 10, 1971	110
Figuring the Tab for Nonmetallic Piping	Apr 15, 1971	70
Determining Centrifugal Thrust at Pipe Elbows	Dec 10, 1970	72
Finding Pipe Length for Flexibility	Aug 20, 1970	86
Determining Expansion Loop Pipe Length	July 9, 1970	76
Data Helps Estimate Piping Costs	May 14, 1970	102
Sizing Circular Sewers	Feb 19, 1970	86
Working With Plastic Piping	Feb 5, 1970	45
Plastic Piping–What Can It Handle? What Does It Cost?	Dec 11, 1969	62
Pipe Blind Thickness Selection Guide	Sept 18, 1969	59
Estimating Piping Costs	Sept 4, 1969	94
How To Find Stress and Sag of Piping	May 1, 1969	65
Quick Sizing of Building Drains	Dec 26, 1968	50
How To Determine Drain Pipe Size	Aug 8, 1968	114
Calculating Heat Loss For Buried Pipelines	Aug 8, 1968	102
Selecting Piping Material With Service in Mind	Jun 13, 1968	108
Engineered Piping System a 'Must' for Critical Products	Apr 18, 1968	126
How To Avoid 10 Tubing Hazards	Feb 8, 1968	84
3520–Valves		
Choosing and Installing Valve Stem Packings	Mar 9, 1972	66
ABC's of Gate Valves	July 22, 1971	62
Butterfly Valves Fit Fluid Control and Shutoff Needs	Dec 24, 1970	52
Assure Safety Valve Reliability by Proper Sizing and Checking	May 29, 1969	68
Valve Actuator Selection Guidelines	Mar 6, 1969	98
Evaluate Blowdown Valve Reaction Force	Jan 23, 1969	57
Lubrication: Key to Plug Valve Maintenance	Mar 21, 1968	90
3530–Fittings & Couplings		
Finding Expansion Joint Precompression	Aug 6, 1970	64
3540–Flexible Hose		
Working With Steam Hose	Nov 2, 1972	75
Hose Considerations for Fluid Power	Feb 4, 1971	40
Knowing and Using Flexible Metal Hose	Oct 29, 1970	58
3580–Filters, Strainers, Traps, Floats		
Determining Trap Back Pressure For Condensate Lift	Feb 18, 1971	82
Keep Plant Steam Traps "On-Line"	July 11, 1968	90
Avoid Coil Freezeups–Use Traps in Piping Hookup	Apr 4, 1968	84
3599–Miscellaneous		
Sonic Nozzles Cut Fuel Costs 15 Percent	Dec 28, 1972	42
4000–PUMPS & COMPRESSORS, PRIME MOVERS		
4010–Pumps		
Pumping Abrasive Fluids	Nov 16, 1972	128
Specifications Chart for Centrifugal Pumps	Oct 19, 1972	82
Specifications Chart for Centrifugal Pumps	Oct 5, 1972	77
Determining NPSH for Boiler Feed Pumps	Apr 20, 1972	79
Radial Reaction in Centrifugal Pumps	Sept 16, 1971	116
Reducing Centrifugal Pump Flow	Aug 19, 1971	64
Details To Consider in Slurry Pump Selection	May 13, 1971	102
Good Service Extends Vacuum Pump Life	Mar 4, 1971	100
Mechanical Vacuum Pumping Aided by Vapor Removal	Nov 12, 1970	80
Avoiding Cavitation in Centrifugal Pumps	Oct 15, 1970	110
Finding Required Centrifugal Pump Flow	Apr 2, 1970	44

	Issue Date	Page No.
Pump Drive Method Controls Flow, Saves $900 Annually	Dec 25, 1969	55
Curves Help Determine Operating Points for Pumps	Oct 16, 1969	64
Curves Help Choose Pumps For Parallel Operation	July 24, 1969	60
System Curve Matches Pump to Piping Layout	May 29, 1969	60
Avoid Heating Problems By Proper Positioning of Pumps	Apr 3, 1969	66
To Pull High Vacuum Try Steam Jet Ejectors	Aug 8, 1968	109
Proper NPSH Protects Pumps	May 16, 1968	78
Chart Shows Water Volume In Tank Pumping Cycle	Apr 18, 1968	110
4020–Compressors		
Checking Actual Air Compressor Capacity	Oct 19, 1972	79
Controlling Centrifugal Compressors	Aug 24, 1972	61
How To Size an Air Compressor	Jun 15, 1972	91
Packaged Air Compressors	Nov 26, 1971	45
Regulating Air Compressor Output	Sept 17, 1970	103
Which Type Air Compressor? Cost Comparison Helps Selection	July 9, 1970	66
Compressed Air Conservation Produces $10,000 Savings in One Year	Nov 27, 1969	46
New Packaged Compressors Save Space, Reduce Installation Cost	Sept 4, 1969	96
Primer on Design Features of Screw Type Compressors	May 1, 1969	62
Air-Water Vapor Mixture Weight Handled by Steam Jet Ejector	Mar 6, 1969	85
Air Compressor Decisions: Single or Multiple, Grouped or Decentralized?	Jan 9, 1969	62
Finding Compressor Volumetric Efficiency Values	Dec 26, 1968	38
Finding Moisture Content in Compressed Air	Nov 14, 1968	124
Determining Compressor Volumetric Efficiency	Oct 3, 1968	74
Compressed Air Study Leads To: Cleaner Air, Less Maintenance	Sept 5, 1968	84
Plot Gas Discharge Temperature	July 11, 1968	81
How Dewpoint Affects Compressed Air Moisture	Jun 13, 1968	98
Portable Compressor Provides Air Insurance for Two Plants	Feb 22, 1968	101
4030–Compressed Air Accessories		
Selecting Compressor System Components	Sept 21, 1972	100
Don't Overlook the Air Receiver	May 18, 1972	96
Control System "Tunes In" Air Filters on Demand	Jan 13, 1972	137
Drying Out Compressed Air	Jan 13, 1972	138
Drying Out Compressed Air	Oct 14, 1971	100
The Industrial Pickpocket: Plant Air Supply Leakage	July 23, 1970	80
Compressed Air–Monster Mix or Moisture-Controlled?	May 28, 1970	60
How Relief Valves Solve Compressed Air Problems	Dec 26, 1968	48
Drying Compressed Air? Take Your Choice of Methods	Jan 25, 1968	82
Design Piping for Efficient Compressed Air System	Jan 25, 1968	86
4040–Prime Movers		
Charting Energy Costs for Air Compressors	Jun 24, 1971	62
Field-Checking Engine Performance	July 23, 1970	70
Watch the Basic Details When Installing Gas Prime Movers	Feb 19, 1970	83
Gas-Driven Air Compressor Reduces Power Costs	Mar 21, 1968	100

	Issue Date	Page No.
4500–MATERIAL HANDLING		
4501–Material Handling Systems		
Principles of Good Handling Practice	Dec 28, 1972	36
Fundamentals of Material Handling–Selection Factors for Handling Equipment	Dec 14, 1972	120
Problem Analysis	Nov 30, 1972	51
Planning a Total Material Handling System	Nov 16, 1972	107
Planning for Materials Flow–Part II	July 8, 1971	58
Planning for Materials Handling–Part I	Jun 10, 1971	102
A Planned Approach to Materials Handling	Aug 6, 1970	50
Materials Handling System Tames Difficult Product	May 28, 1970	57
Four-Plant Production Line Demands Efficient Materials Handling	Apr 30, 1970	50
Updating Warehouse Operations	Apr 2, 1970	32
Shipping and Receiving Docks	Mar 19, 1970	64
Planning for Materials Handling–Key to Company Expansion	Feb 19, 1970	70
Materials Handling Along Inland Waterways	Dec 11, 1969	59
Engineered Warehouse Storage System Provides Quality, Quantity and Speed	Apr 17, 1969	144
How To Take the Confusion Out of Layout Planning	Apr 3, 1969	59
Laying Out Work Areas For Maximum Efficiency	Mar 6, 1969	112
Distribution Warehouse Designed for Versatile Handling	Feb 20, 1969	58
Nine Satellite Storage Areas Consolidated Into One	Jan 9, 1969	52
The Future of Materials Handling	Oct 17, 1968	116
Consider Human Factors in Designing MH Equipment	Feb 22, 1968	106
Plan Shipping Docks With the Future in Mind	Jan 11, 1968	94
4510–Conveyors and Conveyor Systems (including tow cart systems)		
Estimating Power Requirements For Belt Conveyor Drives	May 18, 1972	108
Determining Horsepower For Screw Conveyors	Feb 18, 1971	74
Determining Capacities of Redler Conveyors and Elevators	Sept 17, 1970	118
Trends in Belt Conveyor Systems	July 23, 1970	78
Estimating Bucket Elevator Capacity	Apr 2, 1970	46
Capacities of Natural Frequency Vibrating Conveyors	Jan 22, 1970	76
Determining the Capacities of Screw Conveyors	Dec 25, 1969	56
Guidelines for Planning a Bulk Handling System	Oct 16, 1969	59
Finding Conveyor Angles of Incline	Oct 2, 1969	49
MH Equipment Space Tight? Try Magnetic Conveying	Mar 6, 1969	80
Specifying Handling Equipment For Bulk Processing Plant	Dec 12, 1968	76
Conveyor Bridge Connects New Warehouse to Plant	Nov 14, 1968	110
Tow Cart Systems–Driverless Tractor Guidance Units	Oct 31, 1968	90
Tow Cart Systems–In-Floor Conveyor	Sept 19, 1968	110
Design Techniques For an Overhead Conveyor System	Sept 5, 1968	70
Determining Slope of Inclined Conveyor for Unit Loads	Aug 22, 1968	72
Tow Cart Systems–Overhead Conveyor	Aug 8, 1968	96
Tow Cart Systems–Part II–Tow Tractors	Jun 13, 1968	92
Calculating Bulk Conveyor Capacities	May 30, 1968	50

	Issue Date	Page No.
Tow Cart Systems–Part I–Data Needed for Planning	Apr 18, 1968	94
4515–Conveyor Belts & Idlers		
Selecting and Applying Conveyor Belt Fasteners	July 13, 1972	96
4520–Cranes & Storage Retrieval & Accessories		
Trends in Material Handling	Nov 2, 1972	84
Handling the Big Lifts With Skyhooks	Aug 24, 1972	66
Automating the Plant Warehouse	Feb 10, 1972	74
Specifying and Applying Underhung Cranes–Part III	Nov 12, 1970	73
Part II	Oct 1, 1970	44
Part I	Aug 20, 1970	78
Designing Stacker Cranes for Safe Operation–Part B	Mar 5, 1970	70
Part A	Feb 5, 1970	42
Industrial Remote Handling Systems	Jan 8, 1970	59
How To Select Jib Cranes	Nov 27, 1969	54
Which Best Fits Your Needs–Stackers or Lift Trucks?	Apr 17, 1969	122
We Designed Our Own Crane	Jun 7, 1968	77
Designing Out Troublespots on Special Purpose Cranes	Apr 4, 1968	66
The Mechanics of Lifting a Load	Mar 21, 1968	74
Overhead Crane Design and Selection	Feb 8, 1968	94
Stacker System Solves Two Problems–Storage and Production	Jan 25, 1968	96
4525–Hoists		
Work-Rating of Hoists	Dec 28, 1972	46
Why Use a Mechanical Load Brake on Hoists?	Mar 9, 1972	74
Guide To Selecting Air Hoists Part B–Applications	Jun 25, 1970	98
Part A–Technical Considerations	Apr 16, 1970	95
4530–Elevators		
Plant Engineers Add Safety Features to Dumbwaiter Hoists	Jun 11, 1970	86
Aim Elevator PM at Plant Profitability	Oct 31, 1968	96
4540–Lifting & Transferring Devices		
Industrial Robots–Part B–Attachments and Safety Interlocks	Sept 18, 1969	68
Industrial Robots–Part A–Their Potential in Today's Plant Operations	July 10, 1969	57
4545–Industrial Trucks & Accessories		
Low-Cost Utility Vehicle for Small Plants	Nov 30, 1972	80
Should Lift Trucks Be Converted to LPG?	Apr 20, 1972	80
Calculating Lift Truck Load Ratings	Apr 6, 1972	94
Lift Truck Specifications Chart	Dec 9, 1971	63
Needed: Lift Truck "Driver's Ed" Training	Aug 5, 1971	69
Vintage Truck Still Going Strong On Original Batteries	Apr 15, 1971	76
How Good Are Lift Trucks?	Jan 21, 1971	63
Proper Maintenance Increases Tire Life–Saves Money	Oct 15, 1970	118
Comparing Long Load Handlers	Sept 3, 1970	55
Is the Vehicle Operator Fit to Drive?	July 9, 1970	62
Determining Optimum Replacement Age for Lift Trucks	Oct 30, 1969	58
Sizing Power Requirements for Electric Lift Trucks	Aug 21, 1969	70
Buying a New Lift Truck? Part B–Specifying Design Requirements	Aug 7, 1969	56
Handling System Saves Space, Maintenance and Money	May 29, 1969	72
Buying a New Lift Truck? Part A–Technical Considerations	May 15, 1969	97
PM Programs Improve Industrial Truck Reliability	Feb 20, 1969	70
How Air Film Handling Devices Are Used in Industry	July 11, 1968	88
What Makes a Lift Truck Productive?	May 16, 1968	94
Air Film–The New Frontier In Materials Handling	May 2, 1968	93
4550–Hoppers, Dumpers & Trailers		
Don't Just Train Lift Truck Drivers–License Them	Oct 5, 1972	86
4570–Dock Equipment		
Is Your Dock Area Ready for OSHA?	Sept 7, 1972	100
Determining Dockboard Length	Sept 16, 1971	114
4575–Packaging Equipment		
Matching Strapping Equipment To Needs of Job	Feb 6, 1969	60
4585–Storage, Warehousing, Pallets, Containers, Racks		
Choosing Stacking Methods	Dec 10, 1970	80
Vibrated Hopper Section Discourages Hangups	Nov 27, 1970	81
Container Revolution Hitting Industry	Oct 29, 1970	50
Storing Bulk Materials? Design Ideas for Storage Tanks	July 24, 1969	69
Vibration Solves Sticky Bin Problems	July 25, 1968	98
4590–Rigging Equipment, Below the Hook Devices		
Mechanical Sheet-Handling Methods	Jun 29, 1972	57
Alloy Steel Chains–Lightweight Answer to Today's Heavier Lifts	Oct 28, 1971	52
Program for Hoist Safety	Sept 2, 1971	64
Choosing the Proper Chain Sling	July 22, 1971	68
Determining Lifting Capacity of Vacuum Pads	Apr 1, 1971	46
Fail-Safe Lifting Magnets Protect Against Power Failure	Mar 4, 1971	106
Lifting Irregularly Shaped Steel Load? Match Magnet Poles to Load Shape	Feb 4, 1971	46
Consider These Four Factors When Selecting Lifting Magnets	Jan 7, 1971	44
Maximum Efficiency–Minimum Risk From Your Chains and Slings	May 1, 1969	56
Guide to Selecting Crane Grabs and Lifting Devices	Mar 7, 1968	138
4599–Miscellaneous		
Fanning Magnets: Solution to Conveyor Spacing of Tubular Shapes	Jun 24, 1971	53
Selecting Magnetic Conveyor Pulleys	May 13, 1971	113
5000–CONSTRUCTION		
5001–General		
Construction Problems and Practices	Nov 11, 1971	81
Plant Engineer's Guide to Effective Use of Consultants–Part III	Mar 18, 1971	70
Plant Engineer's Guide to Effective Use of Consultants–Part II	Mar 4, 1971	110
Plant Engineer's Guide to Effective Use of Consultants–Part I	Feb 18, 1971	76
Construction Challenges the Plant Engineer	Sept 17, 1970	87
Warehouse Project Typifies Growth of Young Corporation	Aug 7, 1969	50
Plant Engineer Plus Architect/Engineer	Jun 26, 1969	64
"Ethics in Construction"	Jan 23, 1969	50
5002–Project Planning		
Keeping Construction Costs Under Control	Nov 16, 1972	102
Preparing Drawings and Specifications for Construction Projects	Aug 10, 1972	78

	Issue Date	Page No.
Environmental Factors in Plant Site Selection	July 13, 1972	86
Interpreting Payment Provisions of Construction Contracts	Jun 29, 1972	66
Determining Land Requirements	Aug 5, 1971	64
Selecting a Plant Site? Evaluate Facts and Figures	Apr 1, 1971	40
Estimating Project Costs–Not an Easy Task	Nov 12, 1970	88
Planning and Controlling a Conglomerate-Type Project	Mar 19, 1970	58
Tool for Plant Engineers A Facilities Requirement Checklist	Jan 8, 1970	54
Facilities Planning Techniques Replace "Guesstimates"	Dec 25, 1969	46
Design-and-Build Teamwork Bests Tight Construction Schedule	Nov 13, 1969	66
Experience-Proven Technique to Guide R & D Facility Planning	Oct 3, 1968	54
A Dynamic Approach to Multi-Facility Master Planning	Sept 5, 1968	78
Flood Plain/Plant Site Overlap	July 11, 1968	70
Construction by the Numbers: Warehouse Built in Four Phases	Jun 27, 1968	66
Master Plan Guides Expansion Program	Jun 13, 1968	102
Capital Project Evaluation	Apr 18, 1968	112
Before Constructing New Plant Answer These Six Questions	Jan 11, 1968	84

5003–Plant and Office Layout

Organizing Office Space	Oct 5, 1972	106
Three-Dimensional Plant Layouts	Apr 6, 1972	98
Preparation of Plant Layout Drawings	Sept 2, 1971	70
Mechanical Arrangement Drawings–Final Step to Good Plant Design	July 8, 1971	52
Template/Grid System Produces Efficient Plant Layout Economically	Jan 21, 1971	82
Supergraphics: Big Color Puts Big Plant in Perspective	Oct 29, 1970	46
Facilities Planning Guide–Establishing Unit Areas	Oct 1, 1970	47
Plant Engineering an Audio-Visual/Information Center	Apr 2, 1970	28
Layout Drawing 'Package' Makes Updating Easy	Aug 21, 1969	56
Need a Plant Engineering Building? Design It Yourself to Fit Your Function	July 24, 1969	54
Plant Engineer Builds His Ideal Plant	Apr 17, 1969	110
Layout Planning for Plant Offices	Mar 6, 1969	88
Are Paint Colors REALLY 'Warm,' 'Cool,' 'Advancing' or 'Receding'?	Nov 14, 1968	97
Plant Engineers Design Their Own Office Building	Oct 17, 1968	88

5004–Project Management

The Construction Manager	July 13, 1972	82
Interpreting Construction Contracts	May 4, 1972	89
Obtaining Bids on Medium-Sized Jobs	Feb 24, 1972	66
Liens During Construction	May 27, 1971	54
Liability During Construction–Is It Yours or Your Contractor's?–Part II	May 13, 1971	111
The Art of Substitution: Replacing 'Out of Production' Parts	Apr 29, 1971	51
Liability During Construction–Is It Yours or Your Contractor's?–Part I	Apr 15, 1971	74
Bridging the Design-Installation Gap	Dec 24, 1970	50
Prequalifying a Contractor ... A Major Construction Decision	Dec 10, 1970	68
Are You Writing Construction Contracts?	May 1, 1969	68
Simplified Form Reports Construction Progress	Nov 14, 1968	132
Computer Printout Monitors Critical Path Network	May 2, 1968	111

5005–Structural Systems

Specifications Chart–Metal Building Systems	July 27, 1972	49
Air-Supported Buildings	Sept 16, 1971	103
Precast Concrete Moves Into Systems	Jun 10, 1971	91
Modular Units Provide "Instant" Space	Oct 15, 1970	105
Long-Span Roof Structure 'Broadens' Industry's Plants	Mar 20, 1969	64
Three-Way Benefits From Prestressed Concrete Construction	Mar 7, 1968	105
Construction Cost Estimating–Structural Steel for One-Story Industrial Building	Jan 25, 1968	84

5006–Structural Engineering

Calculate Structural Loads the Easy Way ... With a Minicomputer	Dec 23, 1971	48
Civil Engineering for the Plant Engineer	Apr 29, 1971	52
Connections	Sept 3, 1970	61
Wood Construction	Aug 20, 1970	82
Concrete Construction	July 23, 1970	73
Properties of Structural Shapes	Jun 25, 1970	92
Properties of Structural Materials	Jun 11, 1970	89
Masonry Construction	Jan 9, 1969	66
Steel Construction	Aug 8, 1968	106
Structural Analysis–Why Members Fail	Mar 21, 1968	82
Designing Industrial Plant to Resist Storm Damage	Oct 30, 1969	60
Visual Indexes: Guides to Construction Answers	Oct 16, 1969	68

5007–Plant Expansion and Modernization

Wraparound Walls Modernize Office Structure	May 14, 1970	108
For Facilities Expansion ... Look Into Leasing	Apr 30, 1970	66
Checklist Guides Building Survey	Feb 19, 1970	76
Cable-Supported Inner Roof Lowers High Bay to Working Height	Dec 12, 1968	94
Additional Floor Space Piggybacks on Existing Building	May 16, 1968	82
"Cover the Quonsets" Project Modernizes Warehouse Facilities	Apr 4, 1968	58
Stay-at-Home Addition Simplifies Plant Expansion	Feb 8, 1968	92

5008–Construction Materials

Building With Weathering Steel	May 18, 1972	79
Fighting Corrosion With Reinforced Plastic	Jun 11, 1970	80

5009–Foundations

Augured Piles Solve Difficult Site Problem	Oct 2, 1969	62
Poor Sites Are Poor Risks–Check the Soil Before You Build	Sept 19, 1968	87

5010–Exterior Walls

Construction Cost Estimating–Brick and Concrete Block	May 30, 1968	56

5015–Roof Decks, Roofing

A Roof Should Outlast the Building	Nov 2, 1972	87
Good Roofing Practice Begins at Structural Deck	Mar 23, 1972	104
Upside-Down Roofing System	Feb 10, 1972	84
Radioisotopes Measure Hidden Moisture in Roof	Jan 13, 1972	140
Water On the Roof? Siphon It Off	Oct 14, 1971	106
Got a Roof Problem? Try This Covering Technique	Jan 22, 1970	60
Concrete Fill in Gutters Improves Roof Runoff, Drainage	Nov 28, 1968	51
Built-Up Roofing's Challenge: New Concepts in Plant Design	Nov 14, 1968	98

	Issue Date	Page No.
5020–Sash & Glazing		
Construction Cost Estimating–Siding and Windows	Feb 20, 1969	61
5025–Floors & Flooring		
Estimating Conceptual Costs for Construction Projects–Slab on Grade	Dec 28, 1972	50
How To Protect and Repair Concrete Surfaces	July 13, 1972	98
Foundations for Machine Tools	Jun 1, 1972	55
Why Reinforce Slab-on-Ground Concrete Floors?	Jun 11, 1970	102
Trouble-Free Plant Floor: Concrete Slab Without Mesh	Oct 31, 1968	82
T-Slot Floor Rails Fabricated From Railroad Track Sections	Jun 13, 1968	124
Resilient Tile for Plant Floors? Western Electric Says 'Yes'	Mar 7, 1968	118
5030–Interior Walls & Partitions		
Secluding Shop Offices	Jan 27, 1972	38
Selecting and Installing Interior Walls and Partitions	Sept 16, 1971	118
5035–Building Insulation		
Building Insulation Roundup	Oct 19, 1972	75
Rigid Urethane Foam–The Spray-On Structural Material	May 18, 1972	105
5040–Doors & Operators		
Doors Slowing Traffic? Consider Automatic Operation	July 25, 1968	86
5050–Railroad Equipment		
Maintaining Plant Trackage	Nov 30, 1972	76
Trackwork Terminology . . . How to Talk About Railroads	Jun 24, 1971	54
Railroad Crossings Bumpy? Check Concrete, Rubber or Steel Fillers	Feb 5, 1970	38
Railroad Curvature Restrictions On Load Lengths and Widths	Oct 3, 1968	64
5055–Landscaping & Grounds		
Snow On Its Way . . . Will You Move It or Melt It?	Sept 4, 1969	85
5070–Roads & Parking Lots		
Care and Coating of Asphalt Parking Lots	Aug 19, 1971	62
Planning a Parking Lot? Check the Angles	July 22, 1971	64
Civil Engineering for the Plant Engineer–Plant Transportation Facilities	Feb 22, 1968	98
5099–Miscellaneous		
Hiring a Mover? Give Him Good Specs To Meet	Nov 27, 1969	48
Quick Check For Trench Excavating Costs	Oct 31, 1968	84
Bypass Conveyor Saves $29,000 Keeps Paint Moving During Construction	Aug 8, 1968	105
5500–EQUIPMENT, MAINTENANCE & HOUSEKEEPING		
5501–General Systems		
Developing a Sound Maintenance Concept	Dec 14, 1972	102
The Maintenance Job Order	Nov 2, 1972	64
Planning Vacation Schedules for Maintenance Personnel	Sept 21, 1972	110
Frontline for Cost Control–The Maintenance Supervisor	Sept 21, 1972	91
Contract Maintenance–Pro and Con	Jun 1, 1972	47
Program for Effective Maintenance Supervision	May 18, 1972	95
Minimizing the Problems of Maintenance Department Changes	Jan 27, 1972	42
Economic Principles of Equipment Replacement	Dec 9, 1971	78
Upgrade Maintenance Efficiency with the Base Crew/Craft Pool Concept	Oct 14, 1971	95
The Leader: Key to Maintenance Labor Efficiency	Oct 14, 1971	116
Working With Maintenance Consultants	Sept 30, 1971	40
Trends in Maintenance Practices	Sept 2, 1971	51
Beat the Service Personnel Squeeze With Contract Maintenance	Feb 18, 1971	78
Here's a Vote for Area Maintenance	Nov 27, 1970	70
Maintenance Opportunity of the Year	Oct 1, 1970	30
How NASA's Michoud Base Meets Maintenance Needs on a Contract Basis	Aug 20, 1970	62
In Plant Maintenance–Craft or Area Supervision?	Aug 6, 1970	54
Repair Shop Moves to the Job 2,000 Feet Underground	Aug 21, 1969	52
Maintenance Engineering Achieves Efficiency Through Close Control	Jun 26, 1969	50
Maintenance Management:		
Part III–Control	Jun 12, 1969	61
Part II–Work Measurement	May 15, 1969	103
Part I–Organization and Procedures	Apr 17, 1969	117
Maintenance Management–Killing Maintenance Myths	Jan 9, 1969	70
Stretching the Maintenance Dollar at Goodyear	Sept 19, 1968	78
Plant Maintenance Reaches Astronomical Proportions	Sept 5, 1968	66
Maintenance Is a Vital Ingredient	Aug 22, 1968	54
Maintenance Takes Advantage of Plant Vacation Shutdown	July 11, 1968	83
Whiting Corporation Maintenance Geared to Vacation Shutdown	Mar 7, 1968	92
Plan Carefully for a Sound Maintenance Budget	Mar 7, 1968	132
5505–Process Equipment		
Precision Leveling Assures Machine Tool Accuracy	July 25, 1968	83
Quick Way To Estimate Equipment Costs	Apr 4, 1968	77
5510–Shop Layout & Equipment		
Maintenance Lathes Specifications Chart	Nov 2, 1972	49
Planning the Optimum Maintenance Shop Layout	Aug 24, 1972	51
Table Simplifies Punch and Die Selection	Jun 27, 1968	72
5520–Repair & Stores		
Cutting Costs Through Spare Parts Control	Jun 15, 1972	98
Controlling Maintenance Stores	Apr 6, 1972	87
Preparing a Maintenance Stores Catalog	Mar 4, 1971	95
Random Spare Parts Storage	Jun 11, 1970	98
Plastic Parts Help Reduce Maintenance Tasks	May 14, 1970	110
Predicting Spare Part Needs	Nov 13, 1969	68
Urethane–Versatile Tool for In-Plant Service	Aug 22, 1968	62
5530–Installation Accessories		
Measuring Shock and Vibration	Apr 20, 1972	94
Vibration Control Mounts	Mar 9, 1972	59
Measuring Shock and Vibration	Feb 10, 1972	76
Head Off Downtime by Monitoring Equipment Vibration	Jan 13, 1972	121
Plant Doors Too Small? Install Machines Through Roof	Dec 25, 1969	50
Move Efficiently, No Loss In Production	Oct 16, 1969	52
5533–Maintenance Controls		
Measuring Maintenance Improvement	Nov 2, 1972	59
Value Engineering Can Reduce Maintenance Costs	Jan 25, 1968	110

	Issue Date	Page No.
What Plant Engineers Think of Maintenance Labor Standards	Mar 7, 1968	96
Maintenance Labor Standards CAN Be Established	Apr 4, 1968	87
Preventive-Corrective Maintenance Monitors Equipment Costs	May 16, 1968	75
Maintenance Reporting by Computer	Oct 19, 1972	100
Maintenance Management–How's It Doing?	Sept 7, 1972	85
Installing an Automated Maintenance Information System	Aug 10, 1972	67
Controlling Maintenance In a Small Plant	Nov 26, 1971	60
	Oct 28, 1971	50
	Oct 14, 1971	102
	Aug 19, 1971	60
	Aug 5, 1971	66
	July 22, 1971	56
Pinning a Price Tag on Maintenance Jobs	Sept 16, 1971	132
Planning and Scheduling Boards	July 8, 1971	45
Measuring the Progress of Maintenance Cost Reduction Programs	Jun 24, 1971	60
Key to Profit Improvement–Maintenance by Computer	Apr 15, 1971	63
Measuring Maintenance Performance Against Predetermined Standards	Dec 10, 1970	66
How Many Maintenance Men Should You Have?	July 9, 1970	60
Measuring Small Plant Maintenance Performance	Jun 25, 1970	90
Controlling Runaway Maintenance Costs	May 28, 1970	52
Computer Approach to Work Sampling	May 14, 1970	105
Maintenance Recordkeeping	Mar 19, 1970	76
How Maintenance Managers Use Automatic Data Processing	Oct 2, 1969	46
Audit Measures Maintenance Performance	July 24, 1969	57
Maintenance–A Gold Mine of Opportunity	Mar 20, 1969	68
Maintenance Cost Control	Mar 6, 1969	70
Work Sampling: Valuable Maintenance Management Aid	Sept 19, 1968	84

5543–Preventive Maintenance

Developing an EDP PM Program	Dec 28, 1972	44
Analyzing Malfunctions in Plant Equipment	Oct 5, 1972	101
Scheduling Repetitive Maintenance Jobs	July 27, 1972	53
How To Write Maintenance Instructions for Optimum Results	May 4, 1972	86
Nondestructive Testing–Detective for PM	Apr 20, 1972	98
Controlling PM Work and Spare Parts Inventory	Feb 24, 1972	70
Preventive Maintenance Checklist	Feb 10, 1972	80
Preventive Maintenance "Musts"	Dec 23, 1971	39
Winning the Maintenance Cost Battle	Dec 9, 1971	76
Computer Assisted Scheduling	Nov 11, 1971	90
Maintenance/Production Teamwork is the Secret of Effective PM Scheduling	Oct 28, 1971	54
Getting the Plant Ready for Winter	Sept 16, 1971	107
Short-Interval Maintenance Scheduling	Jun 10, 1971	95
A Computerized Maintenance Information System That Works	May 27, 1971	52
	May 13, 1971	94
	Mar 18, 1971	68
To Meet Today's Maintenance Needs–Formal Scheduling Is a Must	Jan 21, 1971	72
Planning Guidelines for a Small Plant Work Order System–Part II	Jan 7, 1971	48
Planning Guidelines for a Small Plant Work Order System–Part I	Dec 24, 1970	54
Applying the 4th M to Routine Maintenance–Methods	Nov 12, 1970	84
Plant PM and Lubrication Programs Are Computered for Close Control	Oct 15, 1970	98
Modernizing Maintenance Techniques	Sept 17, 1970	106
What Are You Doing To Help Your Maintenance Department?	Sept 3, 1970	52
Thirteen Maintenance Ideas Tailored to Save YOU Money!	July 23, 1970	76
A Sensible Approach to Preventive Maintenance	May 14, 1970	118
Planning and Scheduling of Maintenance in a Small Plant	Mar 5, 1970	58
Engineered Data Leads To: An Efficient Maintenance Control System	Dec 11, 1969	68
EDP–Streamlines PM Saves $200,000 Annually	Nov 27, 1969	56
How To Implement Plant Maintenance Planning	Sept 4, 1969	88
Effective Distribution of PM Time	Aug 7, 1969	59
Locating Hidden Areas For Maintenance Improvement	July 10, 1969	64
PM–Planned to Reduce Paperwork	May 29, 1969	63
PM Scheduling Without a Computer	May 1, 1969	59
Maintenance Planning/Scheduling	Feb 6, 1969	57
Maintenance Planning/Scheduling	Dec 12, 1968	85
Maintenance Decision-Making Aided By Computer	Nov 14, 1968	106
Maintenance Planning/Scheduling	Oct 31, 1968	77
Maintenance Planning/Scheduling	Oct 3, 1968	70
Maintenance Planning/Scheduling	Sept 5, 1968	88
Maintenance Planning/Scheduling	July 25, 1968	72
Avoid These Pitfalls When Setting Up Computerized Maintenance	May 2, 1968	101
Maintenance Program Developed for Top Performance	Feb 8, 1968	81
Recording System Keeps Maintenance 'On Schedule'	Jan 11, 1968	100

5553–Training

The Payoff in Maintenance Training	Mar 23, 1972	90
Effective Maintenance Training Is an All-Out Effort	Oct 28, 1971	39
Maintenance Craft Training–Do It Yourself!	Oct 29, 1970	52
Developing an Inplant Electronics Maintenance Training Program–Part II	Apr 30, 1970	68
Developing an Inplant Electronics Maintenance Training Program–Part I	Apr 16, 1970	92
Motivation and Payoff–The Keys to Maintenance Training	Feb 5, 1970	34
They Took a Stand at Fort Smith Regarding Maintenance Training	Jan 22, 1970	52
Selecting and Training Machine Maintenance Men	Oct 30, 1969	70
Our Answer to Your Most Critical Maintenance Problem	Mar 6, 1969	77
Training Builds Maintenance Crew	Aug 8, 1968	90
Developing the Maintenance Supervisor as a Trainer	Jun 13, 1968	95
Planning–Key to Successful Maintenance Training	Apr 18, 1968	107
Developing a Training Philosophy	Mar 21, 1968	78
AIPE Holds First Craft Training Conference	Jan 25, 1968	114

5580–Housekeeping

Hiring a Contract Cleaning Service	Aug 19, 1971	54
Streamlining Plant Sanitation Program–Boosts Cleanliness, Saves Money	Mar 20, 1969	70
Planning a Professional Plant Housekeeping Program	Jun 13, 1968	113

6000–TOOLS & WELDING

6010–Fasteners & Adhesives

Simplify Repairs with Liquid Adhesive	Feb 24, 1972	68

	Issue Date	Page No.
Different Fastener Technique Ends Unscheduled Downtime	Feb 4, 1971	44
Fasteners in Maintenance Application–Problems and Solutions	Jan 22, 1970	63
Materials and Coatings	Nov 13, 1969	76
Causes of Failure	Aug 21, 1969	65
Special-Purpose Types	Jun 12, 1969	58
Standard Features	Apr 3, 1969	56
Identifying Characteristics	Mar 6, 1969	82
Guide to Bolted Aluminum Alloy Connections	Dec 12, 1968	90
Asymmetric Thread Increases Fastener Strength	Oct 17, 1968	92
Drill-in-Place Fasteners Speed Equipment Installation	Jan 11, 1968	93
6040–Tools, Powered, Portable		
What To Do About Causes of Power Tool Failure	Apr 20, 1972	86
Getting the Most Out of Air Powered Hand Tools	Sept 30, 1971	38
Highlights of New Safety Code for Grinding Wheels	Aug 19, 1971	58
Employing Abrasive Machining in Industry	Oct 29, 1970	66
Grinding's Growing Role in Plant Maintenance	Aug 20, 1970	76
Double-Insulated Tools–A Progress Report	Apr 4, 1968	72
Progress Report on Battery-Operated Tools	Mar 21, 1968	70
6050–Welding Equipment		
Preventing Reverse Flow Explosions In Gas Cutting Equipment	Dec 14, 1972	128
Qualifying Weldors for Plant Maintenance	Jun 10, 1971	115
Trends in Maintenance Welding Today	Mar 18, 1971	53
How Welding Heat Affects Quenched and Tempered Steel	Mar 19, 1970	72
AWS Announces New Welding Symbols	Nov 14, 1968	113
Plant-Designed Positioner Simplifies Large Weldment Projects	Sept 19, 1968	100
Preventing Intergranular Corrosion In Stainless Steel Welds	May 30, 1968	60
Plant-Designed Welding Fixture Makes Circular Welds	May 16, 1968	90
6060–Soldering, Brazing		
Handy Step-by-Step Guide for Welding Plastic Pipe, Equipment	Jan 7, 1971	46
Plastic Welding Techniques for Equipment Fabrication, Repair	Jan 23, 1969	60
6500–PAINTS & PROTECTIVE COATINGS		
6501–General		
Protective Coatings–A Plant Engineering Special Report	Dec 24, 1970	33
A Primer on Maintenance Coatings–Pigments, Solvents, Additives	Jan 25, 1968	92
6502–Corrosion		
Stainless Steel: Why–and How–It Corrodes	Jun 12, 1969	74
Corrosion–An Expensive "Enemy"	Jan 23, 1969	64
Investigating Corrosion	Jun 27, 1968	64
6503–Painting Projects		
Estimating Coating Quality for Cylindrical Tanks	Aug 10, 1972	70
Estimating Protective Coating Costs	Feb 10, 1972	69
Managing Painting Projects	Sept 16, 1971	111
Estimating Surface Areas For Protective Coatings	Mar 4, 1971	102
PPM–Planned Paint Maintenance	Apr 16, 1970	104
Company Paint Standards Make Maintenance Painting Easier	Feb 5, 1970	48
For a Good Paint Job Start With Good Specifications	Apr 3, 1969	54
You CAN Paint Over Mill Scale With Inorganic Zinc-Rich Paint	Aug 22, 1968	58
Annual "Checkup" Keeps Water Storage Tank In Top Shape	May 16, 1968	100
Cost Comparison Proves Painting and Repainting Are Different	Mar 21, 1968	86
Field Testing Rates Coatings For Water Tank Interiors	Feb 8, 1968	78
6510–Preparation		
Surface Preparation for Pinhole-Free Coatings	Jun 15, 1972	109
Cleaning Concrete Floors	Oct 28, 1971	43
Shot Blast Facility Cleans Large Bulky Shapes	Mar 6, 1969	78
6520–Application		
Electrostatic Painting Moves Outdoors	Mar 9, 1972	63
Make It Easy to Clean (First Step in Maintaining Spray Booth)	Jun 24, 1971	66
Tool Up to Electrostatic Painting	Jan 21, 1971	70
Selective Plating–A Plant Engineering Time-and-Money-Saver	Dec 10, 1970	70
Don't Be Held Up by Spray Gun Maintenance Neglect	Jan 8, 1970	56
Measuring Your Protective Coatings	Jun 26, 1969	72
Portable Spray Booth Cuts Costs and Overspray	Dec 26, 1968	45
Service Headers Add Flexibility To Simplify Line Changes	Dec 12, 1968	100
New Spray Technique: Boon to Maintenance Painting?	Oct 16, 1969	66
Paint Booth Spray–Wet to Dry Saves Water, Time and Dollars	July 25, 1968	100
Painting Your Plant? Do It Electrostatically	May 2, 1968	92
Paint Sludge Drier Simplifies Booth Cleanup	Apr 4, 1968	92
6530–Paints & Coatings		
Steel Corrosion Fighters–Water-Based Acrylic Latex Coatings	Nov 2, 1972	90
Metal Building Coatings	Sept 21, 1972	87
Intumescent Coatings–Foaming Firefighters	Aug 5, 1971	76
Plastics, Fillers and Reinforcing Produce Monolithic Protective Coatings	Jun 10, 1971	104
Hot Dip Galvanizing–Prime Coat for Structural Steel	May 13, 1971	109
Controlling Static Electricity With Conductive Flooring	July 24, 1969	72
Plating Room Floor Protected by Plastic Sheet	Oct 17, 1968	90
Organic or Inorganic Zinc-Rich? Match the Coating to the Job	Sept 19, 1968	82
Time-Tested Epoxy Coatings Protect Hoods and Ducts	May 30, 1968	54
7000–FIRE PROTECTION, SAFETY, SANITATION & PERSONNEL SERVICES		
7001–General Systems		
Keeping Up With OSHA . . . a guide to the revised standards and other important related programs	Dec 14, 1972	92
Complying With OSHA's New Amendment	July 13, 1972	73
Exclusive Index to OSHA Standards	Jun 15, 1972	94
An OSHA Status Report	Jun 1, 1972	60
Where to Get Help on OSHA	Mar 9, 1972	69

	Issue Date	Page No.
7010–Lockers		
Save Space By Tailoring Locker Arrangements	May 2, 1968	108
7020–Fire		
Automatic Sprinkler Systems	Aug 24, 1972	59
Portable Fire Extinguishers (Inspecting and Maintaining)	Dec 23, 1971	52
Portable Fire Extinguishers (Selecting and Stationing)	Nov 26, 1971	58
Plant Lightning Protection	Oct 14, 1971	120
Portable Fire Extinguishers (Types and Uses Of)	Sept 2, 1971	62
Go Beyond Your Plant To Train Fire Brigade	Feb 4, 1971	48
Equipping the Plant Fire Brigade	Nov 27, 1970	76
Temporary Sprinkler Impairments Can Cost Millions	Oct 1, 1970	39
Don't Overlook Forklift Fire Hazards	Aug 20, 1970	68
Safe Use of Flammables	Nov 13, 1969	62
Fire Prevention Planning Saves Company from Major Disaster	Sept 18, 1969	54
Boost Fire Protection by Updating Equipment and Methods	Jun 12, 1969	64
Disposing of Flammable Wastes Safely	May 15, 1969	106
How To Handle and Store Flammable Liquids	Jan 23, 1969	68
Tailoring Firefighting Brigade To Meet Plant Needs	Oct 17, 1968	106
Can Your Plant Fire Defenses Meet Today's Abnormal Problems?	July 25, 1968	76
Overhauled Fire Alarm System Pinpoints Trouble Spots	Mar 7, 1968	108
Modernizing Pump Pit Cabinet Stops Water Boosts Plant Fire Protection	Feb 22, 1968	94
7040–Safety		
Engineering for Safety	Jan 27, 1972	36
How Incentives Can Help Safety	Mar 4, 1971	108
Ladder Control Program	Dec 26, 1968	39
Guarding Employees' Eyesight	Nov 28, 1968	54
How Effective Are Plant Safety Rules?	Sept 19, 1968	108
Employee Involvement: Key to Outstanding Safety Record	Aug 22, 1968	60
Plant-Wide Safety Committee Boosts Safety Record	Jan 11, 1968	104
7045–Medical & Health		
Protect Employee Hearing With Audiometric Testing	May 4, 1972	82
7060–Security		
Civil Disturbance and the Plant Engineer Part II	July 8, 1971	60
Part I	May 27, 1971	64
Check Your Plant Security System	Jan 8, 1970	68
Internal Survey Spots Plant Security Problem Areas	Apr 4, 1968	82
7500–POLLUTION CONTROL		
7501–General Systems		
Use an Engineering Approach To Pollution Control	Mar 18, 1971	57
Your 'Clean' Wastes May Be Spreading Disease	May 28, 1970	54
Pollution Control–Full-Time Program at Weirton Steel	Feb 19, 1970	66
Pollution Control–A Special Report	Sept 4, 1969	53
Plant Engineer's Active Role In Pollution Control	Jun 27, 1968	58
How Modine Coordinates Pollution Control Program	Apr 4, 1968	100
7510–Influent Treatment		
Treating Cooling Water To Inhibit Corrosion	Nov 16, 1972	104
Reverse Osmosis Upgrades Demineralized Water Treatment System	Aug 10, 1972	72
Controlling Raw Water Coagulation With Continuous Monitoring	May 18, 1972	98
Selecting a Boiler Water Treatment System	Mar 9, 1972	72
High-Rate/Water Filtration	Oct 28, 1971	56
The Payoff in Water Recycling	Oct 14, 1971	115
High-Rate Water Filtration	Sept 30, 1971	49
Electrostatic Scale Control	Mar 4, 1971	98
Spray Pond Cooling Water Requires Careful Treatment	Oct 15, 1970	120
Proper Feedwater Treatment Helps Minimize Pollution	Oct 1, 1970	34
Cross-Connected System Saves Water and Dollars	Aug 20, 1970	66
Can We Use River Water for Process Equipment Cooling?	Aug 6, 1970	60
Applications of Sodium Ion Exchange Water Softening	Apr 16, 1970	98
Spray Pond Cools Process Water–Enhances Plant Appearance	Nov 27, 1969	53
Pretreatment Techniques For Conditioning Water	Jun 12, 1969	68
Comparing Water Treatment Costs	May 15, 1969	108
Save Water Dollars–Operation of Mixed Bed Deionizers	Apr 3, 1969	64
Reverse Osmosis Process	Dec 12, 1968	92
Reduction of Thermal Stratification Permits Pond Water Re-Use	Oct 17, 1968	102
Water Management Program Cuts Cost By 30 Per Cent	Aug 8, 1968	112
Save Water Dollars–Part B. Anion Exchange Process and Regeneration	July 25, 1968	91
Save Water Dollars–Part A. Techniques on Water Supply Treatment	July 11, 1968	73
Choosing Controls For Automatic Regeneration In Water Softeners	May 2, 1968	115
Chemical Problems in Water System Maintenance	Apr 4, 1968	61
Chemistry of Industrial Water Supply Systems	Mar 7, 1968	102
Design Changes Update Industrial Water Conservation System	Feb 22, 1968	88
Two Separate Recirculation Systems Cut Plant's Water Usage in Half	Feb 8, 1968	90
Integrated Control Method Conserves Process Water	Jan 25, 1968	108
7520–Influent Waste		
Ultimate Liquid Waste Disposal Methods	Oct 19, 1972	88
Neutralizing Industrial Wastes	Jun 15, 1972	96
Treating Spray Painting Wastewater	Jun 1, 1972	64
Wastewater Treatment for Removal of Suspended Solids	May 18, 1972	88
Removing Oil from Plant Effluents	May 4, 1972	84
Package Wastewater Treatment Plants	Feb 10, 1972	65
Don't Throw Waste Oil Away–Use It for Heating	Oct 28, 1971	58
Portable Ion Exchanger Captures Wastewater Contaminants	Sept 16, 1971	138
Metering System Takes the Waste Out of Sewage Costs	Jun 10, 1971	100
Deadline Looms for Permits to Discharge Wastewater	Apr 29, 1971	46
Is a Manpower Crisis Near in Industrial Wastewater Treatment?	Apr 15, 1971	59
Inplant Training Course Contributes to Water Quality	Apr 1, 1971	42

	Issue Date	Page No.
How To Conduct an Inplant Wastewater Survey	Jan 7, 1971	41
Evolution of a Wastewater Treatment Program	Dec 24, 1970	60
Conducting a Water Pollution Survey	Oct 15, 1970	102
Industry's Role in the Clean Water Battle	July 23, 1970	66
Coagulation Control–Jar Testing	Jun 11, 1970	100
Understanding Sewer Ordinances	May 14, 1970	124
Deep Well Injection–One Answer to Liquid Waste Disposal	May 14, 1970	116
How Water Pollution Affects Health	Apr 30, 1970	54
Water Pollution Control–River and Stream Standards	Mar 5, 1970	76
Coagulation–Application and Limitations	Aug 21, 1969	68
Deep Well Disposal May Not Be the Answer	Jan 9, 1969	72
Deep Well Disposal–Cure-All or Troublemaker?	Nov 14, 1968	126
Selecting a Water Pollution Control Consultant	Sept 5, 1968	73
Choosing Aerators For Waste Water Treatment	May 16, 1968	92
Chlorine Destroys Cyanide Wastes–Ends Water Pollution	May 2, 1968	106
Complete Waste Treatment System Designed for New Foundry	Apr 18, 1968	118
Two Separate Sewer Systems Control Water Pollution	Mar 21, 1968	80
No Pollution from Etchants Here	Jan 25, 1968	94
New Waste Water Process Doesn't Pollute Air	Jan 11, 1968	82

7530–Solid Waste Destruction

Pros and Cons of Onsite Incineration	Apr 20, 1972	75
Analyzing the Cost of Solid Waste Disposal	Mar 23, 1972	82
Recycling Process Converts Waste to Fuel	Nov 11, 1971	94
How To Live With the New Incinerator Codes	Oct 14, 1971	118
Solid Waste Incinerators Design and Operation	Apr 2, 1970	35
Applications and Limitations	Mar 19, 1970	61
Incinerator Reduces Fire Hazards and Maintenance	May 30, 1968	59

7540–Solid Waste Handling

Solid Waste Disposal Methods	Jan 13, 1972	127
Methods of Solid Waste Disposal	Dec 23, 1971	42
Stationary Refuse Compactors	Oct 28, 1971	44
Updating Solid Waste Disposal Saves Money	Jun 25, 1970	94
Paper Waste Salvage Provides Profit	May 28, 1970	50
Plant Engineer/Salesman Solves a Problem, Sells the Solution	Dec 25, 1969	34
Applications and Limitations of Waste Compactors	Mar 6, 1969	92

7545–Solid Waste Reclamation

Make Plant Refuse Profitable	Jan 8, 1970	65

7550–Air

Scrubbers for Air Pollution Control	Sept 21, 1972	116
Increasing Venturi Scrubber Efficiency	Sept 7, 1972	104
Removing Air Pollutants With Packed Scrubbers	July 27, 1972	66
Removing Air Pollutants With Packed Scrubbers	July 13, 1972	77
Fume Abater Converts Waste to Useful Energy	Jan 27, 1972	34
Methods for Controlling Odors–Part II	Dec 9, 1971	82
Methods for Controlling Odors–Part I	Nov 26, 1971	49
Simplified Guide to Stack Particulate Sampling Equipment	Oct 14, 1971	91
"Hotside" Electrostatic Precipitator	Sept 2, 1971	58
Measuring Up to Air Pollution Control	July 22, 1971	66
Controlling Fumes and Odors	July 8, 1971	49
TFE-Fluorocarbon Fiber Filter Bags–It Costs More To Go First Class	May 27, 1971	56
The Basics of Dust Collection–Part II	Feb 18, 1971	71
The Basics of Dust Collection–Part I	Jan 21, 1971	75
Piston Hood Saves Plant Air	Dec 10, 1970	78
Planning for Air Pollution Control–Part III	Nov 27, 1970	84
Attack Air Pollution With Fume Incineration	Nov 12, 1970	82
Before Buying an Exhaust System Test for Dust Control	Sept 17, 1970	109
Planning for Air Pollution Control–Part II–Ambient Air Sampling	Sept 3, 1970	58
Do-It-Yourself Dust Suppression System Saves Money	July 23, 1970	84
Planning for Air Pollution Control–Part I–Laws and Their Impact	Jun 11, 1970	94
Air Pollution Problems Faced By the Iron and Steel Industry	Apr 30, 1970	60
Air Pollution Health Effects	Feb 19, 1970	88
Odor Determination Evaluation and Control	Jan 22, 1970	66
Adsorption Control of Air Pollution	Dec 25, 1969	52
Properties of Airborne Pollutants	Dec 11, 1969	56
Baghouse Filter Controls Fine Dust Particles	July 10, 1969	70
Scrubber Licks Tough Fume Problem	Jun 26, 1969	70
Handling Hot Effluent	Jun 26, 1969	57
Catalytic Incinerator Controls Hydrocarbons and Odors	Apr 17, 1969	142
Analyze Air Pollution at Its Source	Apr 17, 1969	114
Centrifugal Collectors–Design Characteristics, Applications	Mar 20, 1969	56
Portable Units Provide Flexibility In Dust Collecting	Feb 6, 1969	56
Fume Scrubber Is Custom-Tailored to the Job	Sept 5, 1968	82
Filter Bags Clean Up Furnace Smoke, Dust, Fumes	July 25, 1968	90
Air Pollution Roundtable	May 30, 1968	42
What To Watch For When Choosing Air Pollution Control Units	Apr 4, 1968	74

7560–Noise

Specification Chart for Noise Control Products	Dec 14, 1972	82
How To Control Noise	Oct 5, 1972	90
The Language of Acoustic Materials	Sept 7, 1972	88
Estimating Control Valve Noise	Jun 29, 1972	60
Causes and Correction of Control Valve Noise	Apr 6, 1972	84
Specifying Noise Limits for Motors	Nov 11, 1971	85
Trimming the Cost of Noise	Sept 16, 1971	120
What Those Motor Noise Standards Mean	Jun 24, 1971	58
Noise Control Requires Abatement by Design	May 13, 1971	89
TRW Plant Engineers Use Two-Prong Approach To Noise Control	Apr 1, 1971	38
Industrial Noise and Its Control	Mar 19, 1970	56
Legal Aspects of Noise Pollution	May 29, 1969	66
NOISE and The Ear	May 1, 1969	54

7570–Noise Measurement

Estimating Noise of Vents To Atmosphere	Aug 5, 1971	62
Instruments For Checking Inplant Noise	Feb 4, 1971	31
Noise Is . . . What?	Nov 12, 1970	66
Sound–When Is It NOISE?	Feb 20, 1969	56

	Issue Date	Page No.
8000–LUBRICATION		
8001–General Systems		
Organizing a Formal Plant Lube Program	Sept 7, 1972	82
The Art of Unorthodox Lubrication . . . Use It Carefully	Jun 29, 1972	51
Checklist of Good Lubrication Practices	Mar 23, 1972	88
Installing the Right Lube Program– Where and When to Lubricate	Sept 2, 1971	55
Choosing the Lubricant	July 8, 1971	56
Minimize Downtime by Employing the Right Lubrication Program	Nov 27, 1970	73
Why Hire a Lubrication Engineer?	Oct 15, 1970	108
Controlled Lubrication System Stops Maintenance Problems Before They Start	July 9, 1970	72
Computer Scheduling Improves Plant Lube Programs	Mar 5, 1970	78
Proposed Standard on Machine Tool Lubrication– Part B	Oct 16, 1969	62
Part A	Oct 2, 1969	56
Needed–A Good Standard for Industrial Lubrication	Apr 17, 1969	126
Coordinated Lubrication Assures Equipment Reliability	Jan 23, 1969	58
Training Lubricators–Part B–Visual Aids and Test Ensure Good Results	Dec 26, 1968	46
Training Lubricators–Part A–Developing an Effective Program	Nov 28, 1968	48
Establishing a Workable Lubrication Program– Part V	Oct 17, 1968	100
Part IV	Sept 19, 1968	106
Part III	July 11, 1968	92
Part II	Jun 13, 1968	105
Part I	May 16, 1968	86
Lubrication on ADP Cuts Maintenance Cost	Feb 22, 1968	96
8010–Lubricants		
Plant Engineer's Exclusive Chart Interchangeable Lubricants	May 27, 1971	47
Cut Lubrication Costs, Boost Performance by . . . Using Today's Improved Greases	Jan 22, 1970	72
Additives Aid Industrial Lubricants	Feb 6, 1969	54
Plant Engineering Develops First Interchangeability Lube Chart	Aug 22, 1968	63
8020–Lubrication Equipment		
Specifying Lubrication Requirements For Machine Heads	May 18, 1972	92
Controlling Contamination in Circulating Lube Systems	Apr 6, 1972	92
Do It Yourself Forced-Feed Lube System . . . for under $200	Dec 23, 1971	50
Over an Economic Oil Barrel? Try a Bulk Tank Farm System	Apr 1, 1971	43
Lubricate Maintenance Problems Away . . . Automatically	Aug 20, 1970	74
Transfer Machine Lube Needs Met by . . . Single-Line Reversible System	May 14, 1970	100
8030–Hydraulic Fluids		
On-the-Spot Diagnosis of Hydraulic Fluids	Oct 5, 1972	104
Controlling Hydraulic Oil Consumption	Feb 10, 1972	70
8040–Cutting Oils & Coolants		
How To Prolong Cutting Tool Coolant Life	Dec 14, 1972	114
Coolant Filtration Systems–Designing and Installing	Nov 30, 1972	68
Cleaning Coolants and Lubricants by Filtration	Nov 2, 1972	68
Wringing Out Quench Oil Rings Up Big Savings	Oct 30, 1969	74

	Issue Date	Page No.
8500–INSTRUMENTS & CONTROLS		
8501–General Systems		
Ultrasonics: Practical Plant Engineering Tool For Level Control	Dec 28, 1972	34
Applying Air Springs To Protect Instruments and Controls– Part II–Air Spring Systems	Nov 27, 1970	78
Part I–Types of Industrial Air Springs	Oct 29, 1970	55
At Ford's Computer-Controlled Glass Plant, Plant Engineering Is Instrument Minded	Mar 21, 1968	66
Study of Frequency Response in Control Systems	Jan 11, 1968	90
8520–Instruments (electrical & mechanical)		
Determining Water Equivalent for Liquid Flow Rotameters	Dec 14, 1972	90
Locating Stack Sampling Traverse Points	Nov 2, 1972	62
Pressure Gage Pointers	Sept 21, 1972	108
Specifications of Graphic Instruments for Measuring Electrical Quantities– Part III	Aug 24, 1972	56
Part II	July 13, 1972	93
Part I	Jun 29, 1972	45
Protecting Instruments and Controls With Surge Suppressors	Mar 23, 1972	86
Process Gas Metering System Promotes Safety, Economy	Jan 21, 1971	80
Recording Instruments–Versatile Electrical Maintenance Aids	Oct 15, 1970	112
Build Your Own Portable Instrumentation System	July 9, 1970	70
Build Detector for Locating Underground Cables and Pipes	Mar 5, 1970	74
Do-It-Yourself Modification Adds Two Functions to Volt-Ohmmeter	Dec 25, 1969	38
How Instruments Measure Moisture in Solids	Nov 28, 1968	56
How Instruments Measure Moisture in Solids	Oct 31, 1968	88
Industrial Applications of Infrared Instruments	Sept 5, 1968	75
Matching Flow Meters to Plant Jobs	Aug 8, 1968	87
Maintenance Control Assures Instrument Reliability	Feb 22, 1968	80
Pros and Cons . . . Types of Instruments for Measuring the Density of Slurries	Feb 8, 1968	98
8530–Scales		
How To Apply Nuclear Scales For Continuous Weighing	Mar 7, 1968	112
8540–Heating & Air Conditioning Controls		
Fuel/Air Control Systems for Boiler Conversion– Part IV–Regulating Air Flow	Sept 30, 1971	37
Part III–Regulating Fuel Flow	Sept 16, 1971	136
Part II–Parallel and Ratio Types	Aug 5, 1971	60
Part I–Defining the Elements	Apr 29, 1971	55
8550–Process Controls		
Maintaining NC Tape Readers	Dec 9, 1971	80
Understanding Gravimetric Feeder Proportioning Systems– Part II	Sept 3, 1970	64
Part I	Aug 6, 1970	57
Automatic Control Is Prime Factor In Moving Material	Mar 6, 1969	90
8560–Logic Controls		
Building a Solid State Control Circuit With Function Modules	Nov 11, 1971	96
Industrial Applications of Logic– Part C–Exploring Logic Level and Hardware Level	Apr 2, 1970	40

	Issue Date	Page No.
Part B–Inverters and Universal Gates	Feb 19, 1970	72
Part A–Basics and Language	Nov 13, 1969	58
Determining Process Control Via the "Building Block Method"–Part C	Aug 7, 1969	62
Part B–Control System Application	Jan 23, 1969	66
Part A–Common System Elements	Dec 26, 1968	42

9000–GENERAL

9001–General Systems

Plant Engineering–Proving Ground for Executives	Jan 27, 1972	27

9003–Editorial Comments

Have You Said "No"?	Jan 7, 1971	33
Running Out of Gas?	Dec 10, 1970	61
Will "PM" Mean "Post Mortem" In Your Plant?	Nov 27, 1970	63
Maintenance Efficiency Down? Try Motivating!	Nov 12, 1970	65
To Pay or Not To Pay	Oct 29, 1970	45
Telling it Good . . . Like the Code Book Should	Oct 15, 1970	97
"Put Your Money Where Your Mouth Is"	Oct 1, 1970	29
Somebody Has to Say 'No!'	Sept 3, 1970	47
Maintenance Efficiency? "Res Ipso Loquiter"	Aug 20, 1970	61
Feedback	Aug 6, 1970	49
Specifications Do Not Apply	July 23, 1970	65
No Time For Politics	July 9, 1970	55
Fire the Whole Purchasing Department	Jun 11, 1970	79
Name-Calling Won't Help	May 28, 1970	43
Keep It Clean . . . It Pays Off!	May 14, 1970	95
Have Slide Rule . . . Why Travel?	Apr 30, 1970	49
The S.A.D.I.S.T.'s Are Coming!	Apr 2, 1970	27
Plant Engineer 'Involvement' Pays Off	Mar 19, 1970	51
Dollars Blowing Into Thin Air?	Feb 19, 1970	65
The Credibility Gap	Feb 5, 1970	33
When Specifying, Be Specific!	Jan 22, 1970	51
You're Improving . . . Don't Stop Now	Jan 8, 1970	49
Management, Of Government?	Dec 25, 1969	33
Let The Seller Be Late	Dec 11, 1969	51
Electrocution Is Only Part of the Problem	Nov 27, 1969	41
Hung Up on Instrumentation? Go Contract	Nov 13, 1969	53
"State of the Plant" Report	Oct 30, 1969	53
Opportunity Knocks . . . 152 Times	Oct 16, 1969	51
Another Study, FCC?	Oct 2, 1969	41
It's Up to You!	Sept 4, 1969	83
Maintenance Must Be Managed	Aug 21, 1969	51
20th Century Pirates	Aug 7, 1969	49
Downtime Getting You Down?	July 24, 1969	53
Purchasing Agent's Dilemma– 'Backdoor Selling'	July 10, 1969	49
The Real Inflationary Threat	Jun 26, 1969	49
Electricity and the Plant Engineer	May 15, 1969	64
Another Plant Engineering Educational Tool	May 1, 1969	49
Are YOU Asleep?	Apr 17, 1969	109
Today 50 Workers Will Die	Apr 3, 1969	49
A Regretful Decision	Mar 20, 1969	49
You're In the Driver's Seat	Mar 6, 1969	69
Take Me Along	Feb 20, 1969	51
1969: A Maintenance Odyssey	Feb 6, 1969	49
The Pendulum Needs A Push	Jan 23, 1969	49
Can an Old Dog Learn New Tricks?	Jan 9, 1969	51
Where Do You Stand?	Dec 26, 1968	33
Stop Wasting Heat!	Dec 12, 1968	75
Caveat Emptor	Nov 28, 1968	41
"We're On Your Side"	Nov 14, 1968	89
From AIPE, in Appreciation	Oct 31, 1968	69
This Wonderful Age of Speed	Oct 17, 1968	81
Why a Double Standard for Wiring?	Oct 3, 1968	53
The Final Authority	Sept 19, 1968	77
Getting Involved in Fluidics	Sept 5, 1968	65
Too Much Advice?	Aug 22, 1968	53
Who Knows Best?	Aug 8, 1968	81
Guaranteed For 25 Years	July 25, 1968	67
Death On The Job	July 11, 1968	69
Too Little–And Too Late	Jun 27, 1968	57
Look Whose Head Is in the Sand	Jun 13, 1968	85
Ignorance–Or Deceit?	May 30, 1968	41
Mandatory Electrical Maintenance	May 16, 1968	65
Why Not Accredited Seminars?	May 2, 1968	85
"DAMN IT–Pollution Control IS Possible!"	Apr 18, 1968	89
The Miracle of American Industry	Apr 4, 1968	57
No Time To Spare	Mar 21, 1968	65
We Try Harder . . . Even in First Place	Mar 7, 1968	91
Fire Losses Up Again . . . Why?	Feb 22, 1968	75
The Bitter Paradox	Feb 8, 1968	73
It's Your Game–Make the Rules	Jan 25, 1968	77
Twenty-Six Opportunities a Year	Jan 11, 1968	77

9005–Plant Engineering Organization & Cover Stories

EXCLUSIVE FEATURE: Executive Report on Major Plant Engineering Problems	Nov 30, 1972	54
The Plant Engineering-Intensive Organization	Nov 30, 1972	47
Coping With the Problems of Going Metric	July 27, 1972	64
The "Whole Job" Concept of Plant Engineering	Jun 15, 1972	83
Management By Objectives	May 18, 1972	110
At GE . . . Plant Engineering Service Is an Important Product	Apr 6, 1972	79
Plant Engineers Gear Up for The Second Hundred Years	Aug 19, 1971	47
Plant Engineers Practice Good Neighbor Policy	Jun 24, 1971	45
What It Takes To Be a Good Leader	Jun 10, 1971	120
Diversified Staff Specializes in Problem-Solving	Apr 1, 1971	29
Plant Engineer in Corporate Management	Jan 7, 1971	34
Small Plant Engineering Group Takes on Big Jobs	Dec 10, 1970	62
Plant Engineering at Electro-Motive Involved in Improvement	Sept 3, 1970	48
Managing Organizational Change	July 23, 1970	86
Plant Engineering Manager–What Is Your Effectiveness?	Jun 25, 1970	96
How Do You Measure Up as a Plant Engineering Manager	Jun 11, 1970	84
From Boilers to Baboons Plant Engineering at Abbott Park	May 14, 1970	96
Makes Facilities Improvement Its Business	Mar 19, 1970	52
Plant Engineer Stands Ready to Solve Facilities Problems	Jan 8, 1970	50
Facility Planning, Recordkeeping Are Properties Department's Strength	Dec 11, 1969	52
Bodine Plant Engineering . . . Versatile, Functional and Busy	Nov 13, 1969	54
Flexibility Sets the Pace at New Nuclear Fuel Plant	Oct 30, 1969	54
Facilities Are Engineered for Profit	July 10, 1969	50
Maintains Precise Power Conditions for Computer Facility–Plant Engineering at RCA	Apr 3, 1969	50
Constant Search for Improvement Brings Rewarding Results	Mar 20, 1969	50
The Plant Engineer's Dilemma– "Advanced Education"	Feb 20, 1969	52

	Issue Date	Page No.
Plant Engineering Demands the Whole Man	Feb 6, 1969	50
Management Is Plant Engineering Oriented	Dec 26, 1968	34
Plant Services Council Guides Corporate Plant Engineering	Nov 28, 1968	42
Courses Specifically Designed For Budding Plant Engineers	Nov 14, 1968	90
Plant Engineering & Maintenance Decentralized for Better Service	Oct 31, 1968	70
Plant Engineering at Sperry Is As Colorful As Its Environment	Oct 17, 1968	82
General Services' Vital Role: Research Site for MSD Program	Aug 8, 1968	82
World-Wide Expansion Program Met by Facilities Engineering	July 25, 1968	68
Plant Engineering Team Develops Special Research Facility	Jun 13, 1968	86
Plant Engineering and Maintenance Developed a Winning Combination	May 16, 1968	66
Facilities Engineering Organized for Dynamic Support	May 2, 1968	86
Plant Engineering Answers 12-Plant Challenge	Apr 18, 1968	90
Evolution of Engineering Services at CPA	Feb 22, 1968	76
Flexibility–Important Asset of Engineering Manager	Feb 22, 1968	104
As Plant Grows–So Grows Plant Engineering Responsibility	Feb 8, 1968	74
ECM&U Organization Keeps Facilities Operation Picture Sharp	Jan 25, 1968	78
How Plant Engineers Can Determine Their Management Style	Jan 25, 1968	99
"Plant Engineers Must Be Managers"	Jan 11, 1968	78
9007–Legal		
When "They" Sue: Who's Liable?	Sept 4, 1969	98
Legal Protection for Creative Ideas	July 24, 1969	76
Is Your Invention Patentable?	May 29, 1969	70
Points of Law Affecting Plant Engineers Agency	Jun 13, 1968	126
Sales and Administrative Law	May 30, 1968	66
9015–Forms, Control & Filing		
Fast Information Retrieval System	July 8, 1971	51
9020–Data Processing & Computers		
Consider a Minicomputer For Your Engineering Department	Jun 10, 1971	107
9025–Conferences & Shows		
Leo Spector Named Chairman of Plant Engineering and Maintenance Conference	Dec 14, 1972	113
International Pollution Engineering Exposition and Congress	Nov 16, 1972	91
Special Material Handling Show Section	Mar 23, 1972	73
The International Pollution Engineering Exposition and Congress	Feb 24, 1972	60
1972 Plant Engineering & Maintenance Show and Conference	Jan 13, 1972	101
H.E.B. Anderson Named General Chairman of Plant Engineering & Maintenance Conference	Dec 9, 1971	71
1971 National Material Handling Show	Apr 29, 1971	35
Plant Engineering & Maintenance Show and Conference	Mar 4, 1971	79
21st National Plant Engineering & Maintenance Show	Apr 16, 1970	73
Thomas E. Hanson Named Associate General Chairman Plant Engineering & Maintenance Conference	Dec 25, 1969	45
1969 Material Handling Show	Jun 12, 1969	72
1969 Material Handling Show Review	May 1, 1969	70
1969 National Plant Engineering & Maintenance Show and Conference	Mar 6, 1969	39
9040–Supplies		
Revolutionary Process for Tape-Label Printing	Nov 16, 1972	126
9045–Drafting		
Photodrafting–Shortcut Technique for Plant Modification Drawings	Apr 20, 1972	82
The Economics of Preparing Engineering Drawings	Nov 26, 1971	62
9099–Miscellaneous		
Do Plant Engineers Really Retire?	Jan 23, 1969	72
Governor Kerner: What About Gerald Cravey?	Apr 18, 1968	97

COMPANY INDEX 1972

	Issue Date	Page No.
A		
Acme Markets, Inc.		
Automatic Sprinkler Systems	Aug 24	59
Alcan Aluminum Corp.		
Estimating Conceptual Costs for Construction Projects	Dec 28	50
Allis-Chalmers		
Selecting Compressor System Components	Sept 21	100
How To Size an Air Compressor	Jun 15	91
Should Lift Trucks Be Converted to LPG?	Apr 20	80
American Air Filter Co., Inc.		
Designing a Makeup Air System–		
Equipment Selection	Nov 30	74
Basic Guidelines	Nov 16	123
American Chain & Cable Co., Inc.		
Mechanical Sheet-Handling Methods	Jun 29	57
Why Use a Mechanical Load Brake on Hoists?	Mar 9	74
American Motors Corp.		
Fire Monitoring / Warning System	Jan 27	40
Ames Laboratory USAEC, Iowa State University		
Updating a Standby Power System	Nov 30	82
Application Engineering Co.		
Drying Out Compressed Air	Jan 13	138
Arbrook, Inc.		
Developing an EDP PM Program	Dec 28	44
B		
Barry Wright Corp.		
How To Control Noise	Oct 5	90
Betz Laboratories, Inc.		
Treating Cooling Water To Inhibit Corrosion	Nov 16	104
C		
Calgon Corp.		
Neutralizing Industrial Wastes	Jun 15	96
Wastewater Treatment for Removal of Suspended Solids	May 18	88
Removing Oil from Plant Effluents	May 4	84
Ceilcote Co.		
Removing Air Pollutants With Packed Scrubbers–		
Part II	July 27	66
Part I	July 13	77
Clarkson Industries, Inc.		
Coolant Filtration Systems–Designing and Installing	Nov 30	68
Cleaning Coolants and Lubricants by Filtration	Nov 2	68
Combustion Equipment Associates, Inc.		
Scrubbers for Air Pollution Control	Sept 21	116
Commonwealth Associates, Inc.		
Treating Spray Painting Wastewater	Jun 1	64
Control Flow Systems, Inc.		
Automating the Plant Warehouse	Feb 10	74
Cosentini Associates, Inc.		
Flow and Pressure Fundamentals for Piping Systems–		
Part V	Oct 19	97
Part IV	Aug 10	75
Part III	Feb 10	72
Don't Overlook Roof Spray Cooling– It Can Cut Air Conditioning Costs	Jun 29	54
Croll-Reynolds Co., Inc.		
Increasing Venturi Scrubber Efficiency	Sept 7	104
D		
Davy Compressor Co.		
Checking Actual Air Compressor Capacity	Oct 19	79
Deere & Co.		
The Economics of Spot Versus Group Relamping	July 27	62
R. R. Donnelley & Sons, Inc.		
Radioisotopes Measure Hidden Moisture in Roof	Jan 13	140
Drexel Institute		
Organizing Office Space	Oct 5	106
Dunham-Bush, Inc.		
Heat Recovery Systems for Industrial Plants–		
Part II	Dec 28	38
Part I	Dec 14	117
Helical Screw Chiller Compressors	Sept 21	112
E		
Electric Reduction Co. of Canada Ltd.		
Coping With the Problems of Going Metric	July 27	64
Ecodyne Corp.		
Selecting a Boiler Water Treatment System	Mar 9	72
The Emerson Consultants, Inc.		
Measuring Maintenance Improvement	Nov 2	59
Maintenance Management–How's It Doing?	Sept 7	85
Engineered Disposal Systems, Inc.		
Analyzing the Cost of Solid Waste Disposal	Mar 23	82
Solid Waste Disposal Methods	Jan 13	127
Environmental Sciences, Inc.		
Ultimate Liquid Waste Disposal Methods	Oct 19	88
Erie Industrial Insulation Corp.		
Rigid Urethane Foam – The Spray-On Structural Material	May 18	105
Esso Standard Libya, Inc.		
Head Off Downtime by Monitoring Equipment Vibration	Jan 13	121
F		
Fairchild Industries		
Obtaining Bids on Medium-Sized Jobs	Feb 24	66
Fairchild Space & Electronics Div.		
Handling the Big Lifts With Skyhooks	Aug 24	66
Federal Sign and Signal Corp.		
Fire Monitoring / Warning System	Jan 27	40
Fisher Controls Co.		
Causes and Correction of Control Valve Noise	Apr 6	84
Flexible Steel Lacing Co.		
Selecting and Applying Conveyor Belt Fasteners	July 13	96
Footlik & Associates		
Principles of Good Handling Practice	Dec 28	36
Selection Factors for Handling Equipment	Dec 14	120
Fundamentals of Material Handling–Problem Analysis	Nov 30	51
L. B. Foster Co.		
Maintaining Plant Trackage	Nov 30	76
Fouche Construction Co.		
The Construction Manager	July 13	82
G		
The Gates Rubber Co.		
Working With Steam Hose	Nov 2	75
Alfred Gray, Inc.		
Preparing Drawings and Specifications for Construction Projects	Aug 10	78
General Electric Co.		
Electric Motor Bearings	Nov 2	78
Surge Protection for Rotating Electrical Equipment – Part II	Oct 19	86
Part I	Sept 7	92
Minimize Repair Downtime With Replaceable Motor Cores	Aug 24	68
Selecting and Coordinating Electrical Trip Devices	July 27	58
LEDs–New Light for an Old Control Concept	May 18	86

	Issue Date	Page No.
Fine-Tuning D-C Commutation ... by the Black Band Method	May 4	80
Preventive Maintenance Checklist	Feb 10	80
Georgia-Pacific Corp.		
Organizing a Formal Plant Lube Program	Sept 7	82
The Art of Unorthodox Lubrication	Jun 29	51
Giffels Associates, Inc.		
Checklist for Avoiding Steam Coil Freezeup	Feb 24	62
The Goodyear Tire & Rubber Co.		
Management By Objectives	May 18	110
H		
The Harris Calorific Co.		
Preventing Reverse Flow Explosions in Gas Cutting Equipment	Dec 14	128
E. F. Houghton & Co.		
Basic Materials for Seals and Packings	Nov 16	120
I		
IBM Corp.		
Reverse Osmosis Upgrades Demineralized Water Treatment System	Aug 10	72
Display Board Registers Alarm Conditions	Mar 23	108
Secluding Shop Offices	Jan 27	38
Control System "Tunes In" Air Filters on Demand	Jan 13	137
Industrial Acoustics Co., Inc.		
The Language of Acoustic Materials	Sept 7	88
J		
Jewel Food Stores		
Don't Just Train Lift Truck Drivers– License Them	Oct 5	86
Joy Manufacturing Co.		
Controlling Centrifugal Compressors	Aug 24	61
Don't Overlook the Air Receiver	May 18	96
K		
Kearney & Trecker Corporation		
Minimizing Electrical Interference in N/C Equipment	Aug 24	64
A. T. Kearney & Co., Inc.		
Installing an Automated Maintenance Information System	Aug 10	67
Keebler Co.		
Scheduling Repetitive Maintenance Jobs	July 27	53
Kelley Co., Inc.		
Is Your Dock Area Ready for OSHA?	Sept 7	100
Kerslund, LeNormand & Quann, Inc.		
Keeping Construction Costs Under Control	Nov 16	102
M		
Maintenance Management Associates		
Developing a Sound Maintenance Concept	Dec 14	102
The Maintenance Job Order	Nov 2	64
Maintenance Reporting by Computer	Oct 19	100
Planning Vacation Schedules for Maintenance Personnel	Sept 21	110
Miami University		
Controlling Maintenance Stores	Apr 6	87
Middle West Service Co.		
How To Write Maintenance Instructions for Optimum Results	May 4	86
Mobil Oil Co.		
On-the-Spot Diagnosis of Hydraulic Fluids	Oct 5	104
Controlling Contamination in Circulating Lube Systems	Apr 6	92
Checklist of Good Lubrication Practices	Mar 23	88
Controlling Hydraulic Oil Consumption	Feb 10	70
Multi-Colortype Co.		
Controlling PM Work and Spare Parts Inventory	Feb 24	70
N		
National Bureau of Standards		
Cutting the Costs of Cooling	Jun 15	88
Navajo Refining Co.		
Program for Effective Maintenance Supervision	May 18	95
Neptune MicroFloc, Inc.		
Controlling Raw Water Coagulation With Continuous Monitoring	May 18	98
Nipak, Inc.		
Determining Water Equivalent for Liquid Flow Rotameters	Dec 14	90
Determining Conduit Size for Conductor Combination	Nov 16	118
Locating Stack Sampling Traverse Points	Nov 2	62
Estimating Coating Quality for Cylindrical Tanks	Aug 10	70
Allowable Ampacities of Insulated Aluminum Conductors	July 13	80
Estimating Control Valve Noise	Jun 29	60
Calculating Tension Requirements	Jun 15	87
Determining Short Circuit Capability of Insulated Conductors	Jun 1	58
Estimating Power Requirements for Belt Conveyor Drives	May 18	108
Determining NPSH for Boiler Feed Pumps	Apr 20	79
Calculating Lift Truck Load Ratings	Apr 6	94
Estimating Protective Coating Costs	Feb 10	69
Sizing Flash Steam Tanks	Jan 13	130
P		
PPG Industries, Inc.		
Engineering for Safety	Jan 27	36
PlanPrint Co.		
Three-Dimensional Plant Layouts	Apr 6	98
Q		
Quantum Science Corp.		
Trends in Material Handling	Nov 2	84
Quebec Iron and Titanium Corp.		
Maintenance Reporting by Computer	Oct 19	100
R		
Raybestos-Manhattan, Inc.		
Choosing and Installing Valve Stem Packings	Mar 9	66
The Research Corp. of New England		
Controlling Interior Air Pollution	Apr 20	93
Filters for Controlling Interior Air Pollution	Mar 23	92
Controlling Interior Air Pollution	Feb 24	64
Rexco Corp.		
Simplify Repairs with Liquid Adhesive	Feb 24	68
Rockwell Mfg. Co.		
What To Do About Causes of Power Tool Failure	Apr 20	86
Rohm & Haas Co.		
Steel Corrosion Fighters–Water-Based Acrylic Latex Coatings	Nov 2	90
Russo, Graham & Obermeyer, Ltd.		
Foundations for Machine Tools	Jun 1	55
S		
Sandia Laboratories		
Central Equipment Monitoring System	Sept 21	94
Sonic Development Corp.		
Sonic Nozzles Cut Fuel Costs 15 Percent	Dec 28	42
Sperry Rand Corp.		
Hydraulic Variable-Speed Drives	Jan 13	124
Square D Co.		
Retrofitting Motor Starters for That Third Overload Protector	Sept 21	98
Limit Switches ... Installation and Maintenance	Jun 29	62

	Issue Date	Page No.
Cam Design	Jun 15	106
Enclosures and Contact Arrangements	Apr 20	84
Selecting Operating Lever	Apr 6	96
Types of Actuators	Feb 10	82
Types and Terminology	Jan 27	32
Stearns Electric Corp.		
Troubleshooting Electric Disc Brakes	Feb 10	78
Sterling Drug, Inc.		
How To Prolong Cutting Tool Coolant Life	Dec 14	114
Sundstrand Aviation		
Frontline for Cost Control–The Maintenance Supervisor	Sept 21	91
T		
The Tappan Co.		
Planning a Total Material Handling System	Nov 16	107
Thomas & Betts Co.		
Terminating Aluminum Conductors	Mar 23	101
Tustin Institute of Technology		
Measuring Shock and Vibration	Apr 20	94
Measuring Shock and Vibration	Feb 10	76
U		
Union Carbide Corp.		
Surface Preparation for Pinhole-Free Coatings	Jun 15	109
Fume Abater Converts Waste to Useful Energy	Jan 27	34
W		
Warner Electric Brake & Clutch Co.		
Industrial Applications of Ball Bearing Screws	Dec 28	31
Operating Characteristics of Ball Bearing Screws	Dec 14	124
Welton Becket and Associates		
Photodrafting–Shortcut Technique for Plant Modification Drawings	Apr 20	82
Westinghouse Electric Corp.		
The PAM Motor	Nov 2	82
Protecting Instruments and Controls With Surge Suppressors	Mar 23	86
Sizing Transformers for Motor Loads	Jan 13	143
Roy F. Weston, Inc.		
Environmental Factors in Plant Site Selection	July 13	86
Wide-Lite Corp.		
Combination Luminaires–Auxiliary Lighting for HID Lamp Restarts	Dec 14	100
Witco Chemical Corp.		
Rigid Urethane Foam–The Spray-On Structural Material	May 18	105
Worthington Pump International, Inc.		
Pumping Abrasive Fluids	Nov 16	128
Wright Div. of ACCO		
Work-Rating of Hoists	Dec 28	46
Z		
The Zia Co.		
How To Protect and Repair Concrete Surfaces	July 13	98
Nondestructive Testing-Detective for PM	Apr 20	98

1971

	Issue Date	Page No.
A		
Aerovent Fan Co., Inc.		
A New Approach to Fresh Air Heating Systems	Mar 4	103
Allis-Chalmers		
Working With Maintenance Consultants	Sept 30	40
Preventing Pump Damage from Piping Strain	Sept 2	72
Needed: Lift Truck "Driver's Ed" Training	Aug 5	69
Details To Consider in Slurry Pump Selection	May 13	102
Preventive Maintenance of Diesel Electric Generators–Part II. The Generator	Jan 21	84
Allis-Chalmers, Controls Div.		
Maintaining Motor Control Centers	Sept 16	127
Installing Motor Control Centers	Aug 19	51
Alma Products Co.		
Program for Hoist Safety	Sept 2	64
American Air Filter Co., Inc.		
Determining Trap Back Pressure for Condensate Lift	Feb 18	82
American Bureau of Shipping		
Consider a Minicomputer for Your Engineering Department	Jun 10	107
American Chain and Cable Co.		
Choosing the Proper Chain Sling	July 22	68
Alloy Steel Chains–Lightweight Answer to Today's Heavier Lifts	Oct 28	52
Anaconda Wire and Cable Co.		
Innovation in Medium-Voltage Cable	Jun 10	98
Anderson-Nichols & Co., Inc.		
Winning the Maintenance Cost Battle	Dec 9	76
Application Engineering Co.		
Drying Out Compressed Air	Oct 14	100
Atlas Chemical Industries, Inc.		
Handy Step-by-Step Guide for Welding Plastic Pipe, Equipment	Jan 7	46
B		
Bailey Meter Co.		
Fuel/Air Control Systems For Boiler Conversion–		
Part IV. Regulating Air Flow	Sept 30	37
Part III. Regulating Fuel Flow	Sept 16	136
Part II. Parallel and Ratio Types	Aug 5	60
Part I. Defining the Elements	Apr 29	55
Baker Filtration Co.		
High-Rate Water Filtration–		
Engineering the System	Oct 28	56
Theory of Operation	Sept 30	49
Barber-Colman Co.		
Planning for Comfort: Air Distribution in the Office	Jun 24	56
Bell & Howell		
Building a Solid State Control Circuit With Function Modules	Nov 11	96
Binks Mfg. Co.		
Cooling Tower Economics	Nov 11	103
Bonner & Moore Associates, Inc.		
Key to Profit Improvement–Maintenance by Computer	Apr 15	63
Borg-Warner Corp.		
The Psychrometric Chart–Tool for Estimating Air Conditioning Heat Loads	Oct 14	108
C		
Cargocaire Engineering Corp.		
Recovering Waste Heat–Installing a Rotary Exchanger	May 27	62
Rotary Exchangers Transfer by Wheels	May 13	100
Catalytic, Inc.		
Beat the Service Personnel Squeeze With Contract Maintenance	Feb 18	78
Caterpillar Industrial Div.		
Charting Energy Costs for Air Compressors	Jun 24	62

	Issue Date	Page No.
Ceilcote Co.		
Installing Underground Plastic Sewer and Drain Lines	Sept 30	46
Plastics, Fillers, and Reinforcing Produce Monolithic Protective Coatings	Jun 10	104
Chicago Tribune		
Centralized Annunciator System Keeps Tabs on Isolated Equipment	Mar 18	66
Consulting Engineers, Inc.		
Interior Walls and Partitions	Sept 16	118
Cosentini Associates, Inc.		
Flow and Pressure Fundamentals for Piping Systems		
Part II	Nov 26	52
Part I	Sept 16	130
E		
Eastern Stainless Steel Co.		
Propane System Permits Interruptible Rate Service	Apr 29	43
Eclipse Systems, Inc.		
Tool Up to Electrostatic Painting	Jan 21	70
Electric Reduction Co. of Canada		
How Incentives Can Help Safety	Mar 4	108
Engelhard Minerals and Chemicals Corp.		
Controlling Maintenance In a Small Plant–		
Planning and Scheduling the Work	Nov 26	60
Installing the Maintenance Work Order	Oct 28	50
Equipment Repair Records	Oct 14	102
Distributing Labor Hours	Aug 19	60
Organizing a Timekeeping Method	Aug 5	66
What Are the Requirements?	July 22	56
Engineered Disposal Systems, Inc.		
Methods of Solid Waste Disposal	Dec 23	42
How To Live With the New Incinerator Codes	Oct 14	118
Eriez Magnetics		
Fanning Magnets: Solution to Conveyor Spacing of Tubular Shapes	Jun 24	53
Fail-Safe Lifting Magnets Protect Against Power Failure	Mar 4	106
Lifting Irregularly Shaped Steel Load? Match Magnet Poles to Load Shape	Feb 4	46
Consider These Four Factors When Selecting Lifting Magnets	Jan 7	44
Esso Standard Libya, Inc.		
Do It Yourself Forced-Feed Lube System ... for under $200	Dec 23	50
F		
Fairchild Hiller Corp.		
Hiring a Contract Cleaning Service	Aug 19	54
Fairchild Industries		
Managing Painting Projects	Sept 16	111
Federal-Mogul Corp.		
Sleeve Bearings: Their Composition, Geometry and Lubrication	Feb 4	42
L. B. Foster Co.		
Trackwork Terminology ... How To Talk About Railroads	Jun 24	54
G		
General Electric Co.		
Specifying Noise Limits for Motors	Nov 11	85
Understanding the New Language of Lighting	Jan 21	68
Giffels Associates, Inc.		
Don't Let the Cold Air In–Use a Doorway Heater	Sept 16	134
Planning for Materials Handling	Jun 10	102
Figuring the Tab for Nonmetallic Piping	Apr 15	70
B. F. Goodrich Co.		
Installing the Right Lube Program–		
Where and When to Lubricate	Sept 2	55
Choosing the Lubricant	July 8	56
The Goodyear Tire & Rubber Co.		
Getting the Plant Ready for Winter	Sept 16	107
Greer Olaer Products, Inc.		
Using the Hydraulic Accumulator as a Secondary Power Source	Dec 23	46
Sizing Hydraulic Accumulators	Oct 28	47
Dual-Pressure Hydraulic Systems	Sept 2	60
H		
Halstead Industries, Inc.		
A Case for the Air-Cooled Condenser	Dec 9	72
Hofstra University		
Planning Guidelines for a Small Plant Work Order System–Part II	Jan 7	48
Honeywell, Inc.		
The Payoff in Water Recycling	Oct 14	115
Shedding Light on Relamping Costs	July 22	59
Hydrotechnic Corp.		
Deadline Looms for Permits To Discharge Wastewater	Apr 29	46
I		
Imperial-Eastman Corp.		
Hose Considerations for Fluid Power	Feb 4	40
Industrial Acoustics Co., Inc.		
Trimming the Cost of Noise	Sept 16	120
Industrial Services of America, Inc.		
Stationary Refuse Compactors	Oct 28	44
Ingersoll-Rand Co.		
Getting the Most Out of Air Powered Hand Tools	Sept 30	38
J		
Jacobs Engineering Co.		
Measuring Up to Air Pollution Control	July 22	66
K		
Kaiser Aluminum & Chemical Corp.		
Beating Those Power Demand Charges	Nov 11	88
Keebler Co.		
Fast Information Retrieval System	July 8	51
L		
Lightning Protection Institute		
Plant Lightning Protection	Oct 14	120
Lockheed Missiles & Space Co.		
Portable Ion Exchanger Captures Wastewater Contaminants	Sept 16	138
Los Alamos Scientific Laboratory		
Inplant Training Course Contributes to Water Quality	Apr 1	42
M		
Maintech, Inc.		
To Meet Today's Maintenance Needs–Formal Scheduling Is a Must	Jan 21	72
Mason-Rust		
Short Interval Maintenance Scheduling	Jun 10	95
H. B. Maynard and Co., Inc.		
A Computerized Maintenance Information System That Works: Installing the System	May 27	52
Working With Modules	May 13	94
Reporting the Information	Mar 18	68
Preparing a Maintenance Stores Catalog	Mar 4	95
Merrill & Associates		
How To Conduct an Inplant Wastewater Survey	Jan 7	41
Miami University		
Computer Assisted Scheduling	Nov 11	90
Mobil Oil Corp.		
Don't Throw Waste Oil Away–Use It for Heating	Oct 28	58

	Issue Date	Page No.
Monsanto Co.		
Random Spare Parts Storage	Jun 11	98
Hot Dip Galvanizing–Prime Coat for Structural Steel	May 13	109
N		
NASA		
Providing Reliable Power for Computer Systems	Jan 7	38
Nestle Co.		
Recycling Process Converts Waste to Fuel	Nov 11	94
The New York Blower Co.		
Working With Fan Performance Curves	Mar 18	62
Nipak, Inc.		
Determining Constraining Force on Heated Pipe	Sept 30	44
Determining Dockboard Length	Sept 16	114
Checking Combustion Efficiency	Sept 2	69
Estimating Noise of Vents to Atmosphere	Aug 5	62
Finding Air Density and Velocity for Fan Testing	July 8	54
Measuring and Making Angle Cuts on Fabricated Pipe Bends	Jun 10	110
Selecting Magnetic Conveyor Pulleys	May 13	113
Determining Lifting Capacity of Vacuum Pads	Apr 1	46
Determining Horsepower for Screw Conveyors	Feb 18	74
Determining Amperes Per Kilowatt at Given Power Factor	Feb 4	36
O		
Oxy-Catalyst, Inc.		
Controlling Fumes and Odors	July 8	49
P		
PPG Industries, Inc.		
Go Beyond Your Plant To Train Fire Brigade	Feb 4	48
Parker Hannifin Corp.		
Getting Compressed Air in Shape	Mar 18	60
Parkview Memorial Hospital		
Pinning a Price Tag on Maintenance Jobs	Sept 16	132
The Patterson-Kelley Co., Inc.		
Selecting Heat Exchangers	Feb 4	37
Pennsalt Corp.		
Good Service Extends Vacuum Pump Life	Mar 4	100
Q		
Quebec Iron and Titanium Corp.		
Upgrade Maintenance Efficiency With the Base Crew/Craft Pool Concept	Oct 14	95
R		
The Research Corp. of New England		
Use an Engineering Approach to Pollution Control	Mar 18	57
S		
Silas Mason Co., Inc.		
Stop Those Motor Burnouts	Sept 2	66
W. W. Sly Mfg. Co.		
Methods for Controlling Odors–Part II	Dec 9	82
Part I	Nov 26	49
The Basics of Dust Collection–Part II	Feb 18	71
Part I	Jan 21	75
Sola Basic Industries		
Troubleshooting HID Lighting Systems	Nov 11	106
Sperry Rand Corp.		
Measuring the Progress of Maintenance Cost Reduction Programs	Jun 24	60
Template/Grid System Produces Efficient Plant Layout Economically	Jan 21	82
Standard Oil Co. of California		
Noise Control Requires Abatement by Design	May 13	89
Different Fastener Technique Ends Unscheduled Downtime	Feb 4	44
Superior Engineering Corp.		
Plant Engineer's Guide to Effective Use of Consultants –		
Administering the Contract	Mar 18	70
Selecting the Consultant	Mar 4	110
Laying the Groundwork	Feb 18	76
Sundstrand Corp.		
Over an Economic Oil Barrel? Try a Bulk Tank Farm System	Apr 1	43
T		
TRW, Inc.		
TRW Plant Engineers Use Two-Prong Approach to Noise Control	Apr 1	38
Texas Instruments, Inc.		
Process Gas Metering System Promotes Safety, Economy	Jan 21	80
Trane Co.		
Cooling the Human "Heat Plant"	Apr 1	33
U		
Uniroyal Chemical		
The Leader: Key to Maintenance Labor Efficiency	Oct 14	116
What It Takes To Be a Good Leader	Jun 10	120
W		
Western Electric Co., Inc.		
Calculate Structural Loads the Easy Way ... With a Minicomputer	Dec 23	48
Cleaning Concrete Floors	Oct 28	43
Emergency Reporting System Prints Out Trouble	Oct 14	104
Care and Coating of Asphalt Parking Lots	Aug 19	62
ABC's of Gate Valves	July 22	62
Civil Disturbance and the Plant Engineer		
Part I	July 18	60
Part II	May 27	64
How Air Conditioning System Can Have Efficiency Advantage	Jan 21	78
Westinghouse Electric Corp.		
Selecting Locking Plugs and Receptacles	Nov 26	55
Operating Two Mechanically Connected Motors	Sept 30	42
What Those Motor Noise Standards Mean	Jun 24	58
Metering System Takes the Waste Out of Sewage Costs	Jun 10	100
Guidelines for Selecting Synchronous Motors–		
Torque Considerations	Apr 29	48
General Considerations	Apr 15	67
Worthington Corp.		
Radial Reaction in Centrifugal Pumps	Sept 16	116
Z		
The Zia Co.		
Qualifying Weldors for Plant Maintenance	Jun 10	115

1970

	Issue Date	Page No.
A		
Allis-Chalmers		
Preventive Maintenance of Diesel Electric Generator Sets–Part 1. The Prime Mover	Dec 24	58
Choosing Stacking Methods	Dec 10	80
Here's a Vote for Area Maintenance	Nov 27	70
Container Revolution Hitting Industry	Oct 29	50
Avoiding Cavitation in Centrifugal Pumps	Oct 15	110
Comparing Long Load Handlers	Sept 3	55
Cross-Connected System Saves Water and Dollars	Aug 20	66
Is the Vehicle Operator Fit To Drive	July 9	62
A Sensible Approach to Preventive Maintenance	May 14	118
Updating Solid Waste Disposal Saves Money	Jun 25	94
CB Radio Solves Safety Signalling Problem	Mar 19	67
American Air Filter Co.		
Keep Plant Air Pressure Positive With Makeup Air Units	Nov 12	76
American Medical Association		
How Water Pollution Affects Health	Apr 30	54
Amprobe Instrument Div.		
Recording Instruments–Versatile Electrical Maintenance Aids	Oct 15	112
Anderson-Nichols & Co., Inc.		
Butterfly Valves Fit Fluid Control and Shutoff Needs	Dec 24	52
Air Conditioning Approach Gives Plant Expansion Flexibility	Apr 16	108
Armco Steel Corp.		
Deep Well Injection–One Answer to Liquid Waste Disposal	May 14	116
The Armstrong Rubber Co.		
Why Hire a Lubrication Engineer?	Oct 15	108
B		
Beacon Oil Co.		
How Many Maintenance Men Should You Have?	July 9	60
Binks Manufacturing Co.		
Don't Be Held Up by Spray Gun Maintenance Neglect	Jan 8	56
Bussman Div.		
Coordinating Electrical Protection	May 14	121
C		
Cabot Piping Systems		
Working With Plastic Piping	Feb 5	45
The Carborundum Co.		
Photocells Replace Relays ... Minimize Control Maintenance	Jun 11	106
Catalytic Construction of Canada, Ltd.		
Burner Efficiency Boosted, Maintenance Minimized By Circulating Fuel Oil in Storage	Apr 16	89
Chemargo Corp.		
Modernizing Maintenance Techniques	Sept 17	106
Chicago Institute of Medicine		
Your 'Clean' Wastes May Be Spreading Disease	May 28	54
Clark Equipment Co.		
Company Paint Standards Make Maintenance Painting Easier	Feb 5	48
Cleveland Worm & Gear Div.		
Care of Worm Gear Speed Reducers	Oct 29	60
Selecting and Installing Worm Gear Speed Reducers	Oct 1	42
Columbia Broadcasting System, Inc.		
Checklist Guides Building Survey	Feb 19	76
Commerce and Industry Insurance Co.		
Temporary Sprinkler Impairments Can Cost Millions	Oct 1	39
Consulting Engineers, Inc.		
Civil Engineering for Plant Engineer–Connections	Sept 3	61
Wood Construction	Aug 20	82
Concrete Construction	July 23	73
Properties of Structural Materials	Jun 11	89
Container Corp. of America		
Paper Waste Salvage Provides Profit	May 28	50
Cooper-Bessemer Co.		
Can We Use River Water for Process Equipment Cooling?	Aug 6	60
Curtis-Electro Lighting, Inc.		
Correlating Electrical and Mechanical Design in Heat-of-Light Installations	May 14	113
D		
Day and Zimmermann, Inc.		
Air Pollution Problems Faced by the Iron and Steel Industry	Apr 30	60
Douglas United Nuclear, Inc.		
Maintenance Craft Training–Do It Yourself!	Oct 29	52
Dynascan Corp.		
Industrial Remote Handling Systems	Jan 8	59
E		
Eaton Yale & Towne, Inc.		
Hydrostatic Drives Depend on Controls	Dec 10	76
Care of Worm Gear Speed Reducers	Oct 29	60
Selecting and Installing Worm Gear Speed Reducers	Oct 1	42
F		
Fairchild Hiller Corp.		
Prequalifying a Contractor ... A Major Construction Decision	Dec 10	68
Plant Engineering an Audio-Visual/Information Center	Apr 2	28
Oversize Your Heating Contractors for Longer Life	Mar 5	80
Laying Down Direct Burial Cable? First Lay Down Burial Specs	Feb 5	40
The Falk Corp.		
Extend Life of Speed Reducers by Avoiding Pitfalls	July 23	82
Flexonics Div., UOP		
Knowing and Using Flexible Metal Hose	Oct 29	58
G		
General Electric Co.		
Bridging the Design-Installation Gap	Dec 24	50
Measuring Maintenance Performance Against Predetermined Standards	Dec 10	66
Controlling Corrosion of Electrical Enclosures	Jun 25	87
Proper Application and Maintenance of Protective Electrical Devices	Mar 19	70
Dry-Type Single Phase Transformers: Versatile Tools for Special Applications	Feb 19	80
Tool for Plant Engineers–A Facilities Requirement Checklist	Jan 8	54
General Motors Corp., Buick Motor Div.		
Developing an Inplant Electronics Maintenance Training Program–Part II. Guidelines and Recommendations	Apr 30	68

	Issue Date	Page No.
Part I. The Need ... Meeting the Need	Apr 16	92
Georgia-Pacific Corp.		
Measuring Small Plant Maintenance Performance	Jun 25	90
Planning and Scheduling of Maintenance in a Small Plant	Mar 5	68
Giffels & Rossetti, Inc.		
Data Helps Estimate Piping Costs	May 14	102
Gillig Brothers, Inc.		
Perimeter Intrusion Protection	Sept 17	112
Glidden-Durkee Div., SCM Corp.		
PPM–Planned Paint Maintenance	Apr 16	104
The Goodyear Tire & Rubber Co.		
Applying Air Springs to Protect Instruments and Controls– Part II. Air Spring Systems	Nov 27	78
Part I. Type of Industrial Air Springs	Oct 29	55
In Plant Maintenance–Craft or Area Supervision?	Aug 6	54
Trends in Belt Conveyor Systems	July 23	78
Greenlee Brothers & Co.		
Controlled Lubrication System Stops Maintenance Problems Before They Start	July 9	72
H		
Harry O. Hefter Assoc.		
Vibrated Hopper Section Discourages Hangups	Nov 27	81
Hofstra University		
Planning Guidelines for a Small Plant Work Order System– Part I. Why Have Work Orders?	Dec 24	54
I		
IBM		
Modular Units Provide "Instant Space"	Oct 15	105
Clean Room Project–Highlights Special Features of Air System	Aug 6	62
Industrial Acoustics Co., Inc.		
Industrial Noise and Its Control	Mar 19	56
Industrial Fasteners Institute		
Fasteners in Maintenance–Application Problems and Solutions	Jan 22	63
Industrial Services of America		
Make Plant Refuse Profitable	Jan 8	65
Ingersoll-Rand Co.		
Guide To Selecting Air Hoists– Part B. Applications	Jun 25	98
Part A. Technical Considerations	Apr 16	95
Inteck Consultants, Inc.		
Estimating Project Costs–Not an Easy Task	Nov 12	88
Interlake Steel Corp.		
Priority System Replaces 'Across the Board' Motor Maintenance Program	Apr 2	38
Designing Stacker Cranes for Safe Operation Part B	Mar 5	70
Part A	Feb 5	42
J		
Joy Mfg. Co.		
Regulating Air Compressor Output	Sept 17	103
Which Type Air Compressor? Cost Comparison Helps Selection	July 9	66
K		
Kaiser Engineers		
Determining Fluid Pressure Drop	Nov 12	78
L		
LTV Aerospace Corp.		
Monitoring System Pinpoints Machine Maintenance Needs	Oct 15	122
M		
McCord Corp.		
Transfer Machine Lube Needs Met by ... Single-Line Reversible System	May 14	100
McDonnell Douglas Corp.		
Spray Pond Cooling Water Requires Careful Treatment	Oct 15	120
McGraw-Edison Co.		
Coordinating Electrical Protection	May 14	121
Madison-Kipp Corp.		
Lubricate Maintenance Problems Away ... Automatically	Aug 20	74
Malinckrodt Chemical Works, Inc.		
Build Your Own Portable Instrumentation System	July 9	70
Merrick Scale Mfg. Co.		
Understanding Gravimetric Feeder Proportioning Systems– Part II. Multiunit Systems	Sept 3	64
Part I.	Aug 6	57
Merrill & Associates		
Conducting a Water Pollution Survey	Oct 15	102
Metropolitan Refining Co., Inc.		
Proper Feedwater Treatment Helps Minimize Pollution	Oct 1	34
Mobil Oil Corp.		
Minimize Downtime by Employing the Right Lubrication Program	Nov 27	73
Computer Approach to Work Sampling	May 14	105
Cut Lubrication Costs, Boost Performance by ... Using Today's Improved Greases	Jan 22	72
The Mogul Corp.		
Coagulation Control–Jar Testing	Jun 11	100
Monsanto Chemical Co.		
Build Detector for Locating Underground Cables and Pipes	Mar 5	74
N		
National Loss Control Service Corp.		
Solid Waste Incinerators– Design and Operation	Apr 2	35
Applications and Limitations	Mar 19	61
Nipak, Inc.		
Finding Air Temperature Rise Through Forced Draft Fans	Dec 24	49
Determining Centrifugal Thrust at Pipe Elbows	Dec 10	72
Determining Cavity Ratios for Zonal Cavity Lighting Calculations	Nov 27	68
Allowable Ampacities of Insulated Copper Conductors	Oct 29	62
Determining Capacities of Redler Conveyors and Elevators	Sept 17	118
Finding Expansion Joint Precompression	Aug 6	64
Determining Expansion Loop Pipe Length	July 9	76
'No Trig' Solution to Power Factor Problems	Apr 16	102
Estimating Bucket Elevator Capacity	Apr 2	46
Capacities of Natural Frequency Vibrating Conveyors	Jan 22	76
Norton Co.		
Employing Abrasive Machining in Industry	Oct 29	66
Grinding's Growing Role in Plant Maintenance	Aug 20	76
P		
P & W Engineers, Inc.		
Shipping and Receiving Docks	Mar 19	64
Planning for Materials Handling– Key to Company Expansion	Feb 19	70
PPG Industries, Inc.		
Equipping the Plant Fire Brigade	Nov 27	76

	Issue Date	Page No.
Parker-Hannifin Corp.		
The Industrial Pickpocket: Plant Air Supply Leakage	July 23	80
Proper Selection and Installation of Air Regulators	Apr 30	64
Pennsalt Corp.		
Mechanical Vacuum Pumping Aided by Vapor Removal	Nov 12	80
The Permutit Company		
Applications of Sodium Ion Exchange Water Softening	Apr 16	98
The Polymer Corp.		
Plastic Parts Help Reduce Maintenance Tasks	May 14	110
Purex Corporation		
For Facilities Expansion ... Look Into Leasing	Apr 30	66
S		
SOS Consolidated, Inc.		
Recording Instruments–Versatile Electrical Maintenance Aids	Oct 15	112
Selectrons, Ltd.		
Selective Plating–A Plant Engineering Time- and Money-Saver	Dec 10	70
Sherwin-Williams Co.		
Maintenance Recordkeeping	Mar 19	76
Simeone Stone Corp.		
Do-It-Yourself Dust Suppression System Saves Money	July 23	84
J. E. Sirrine Co.		
Planning for Air Pollution Control–		
Part III. Equipment	Nov 27	84
Part II. Ambient Air Sampling	Sept 3	58
Part I. Laws and Their Impact	Jun 11	94
C. F. Skinner Engineering Co.		
Odor Determination Evaluation and Control	Jan 22	66
Sperry Rand Corp.		
Controlling Runaway Maintenance Costs	May 28	52
Sprout, Waldron & Company, Inc.		
Automatic Control Is Prime Factor In Moving Material	Mar 6	90
Sun Oil Co.		
Applying the 4th M to Routine Maintenance–Methods	Nov 12	84
Sunbeam Lighting Co., Inc.		
Correlating Electrical and Mechanical Design in Heat-of-Light Installations	May 14	113
T		
TRW, Inc.		
What Are You Doing To Help Your Maintenance Department?	Sept 3	52
Tri-Energy Corp.		
Watch the Basic Details When Installing Gas Prime Movers	Feb 19	83
The Torrington Company		
Computer Scheduling Improves Plant Lube Programs	Mar 5	78
U		
Uniroyal, Inc.		
Boiler Capacity Increased After Firing Conversion	Jun 11	92
V		
Van Air Inc.		
Compressed Air–Monster or Moisture Controlled?	May 28	60
Vibra Screw Inc.		
Vibrated Hopper Section Discourages Hangups	Nov 27	81
W		
Jervis B. Webb Co.		
Specifying and Applying Underhung Cranes–Part III	Nov 2	73
Part II	Oct 1	44
Part I	Aug 20	78
Western Electric Co.		
Understanding Sewer Ordinances	May 14	124
Updating Warehouse Operations	Apr 2	32
Water Pollution Control–River and Stream Standards	Mar 5	76
Westinghouse Electric Corp.		
Evolution of a Wastewater Treatment Program	Dec 24	60
Put Computer To Work for You in Electrical Distribution Design–		
Part II	Dec 10	73
Part I	Nov 12	70
Wraparound Walls Modernize Office Structure	May 14	108
Westinghouse Electric Corp., Control Products Div.		
Applying Thermal Overload Relays–		
Part III	Sept 17	114
Part II	Aug 20	70
Part I	July 9	56
Wire Reinforcement Institute		
Why Reinforce Slab-on-Ground Concrete Floors?	Jun 11	102

1969

	Issue Date	Page No.
A		
Allis-Chalmers		
Application and Control of Synchronous Motors	Mar 6	94
Allis-Chalmers, Control & Switchgear Div.		
How To Select Reduced Voltage Starters	Aug 21	58
American Precision Industries, Inc.		
Fixed Tube Sheet Heat Exchangers	Oct 2	52
Amway Corp.		
Warehouse Project Typifies Growth of Young Corporation	Aug 7	50
Anaconda American Brass Co.		
Selecting and Training Machine Maintenance Men	Oct 30	70
Armour and Co.		
Primer on Design Features of Screw Type Compressors	May 1	62
Armstrong Tire and Rubber Co.		
Baghouse Filter Controls Fine Dust Particles	July 10	70
Atkins, Hatch & Associates, Ltd.		
Buying a New Lift Truck?		
Part B. Specifying Design Requirements	Aug 7	56
Part A. Technical Considerations	May 15	97
The Austin Co.		
Contruction Cost Estimating–Siding and Windows	Feb 20	61
Automatic Electric Co.		
Distribution Warehouse Designed for Versatile Handling	Feb 20	58

	Issue Date	Page No.
B		
Bailey Meter Co.		
Determining Process Control Via the "Building Block Method"– Part C. Analyzing Instrumentation Needs	Aug 7	62
Part B. Control System Application	Jan 23	66
The Ballinger Co.		
Plant Engineer Plus Architect/Engineer	Jun 26	64
The Bassick Co.		
Handling System Saves Space, Maintenance and Money	May 29	72
Bendix Corp.		
Choose the Right Procedure for Efficient Heat Transfer	Apr 17	131
C		
C. E. T.		
Buying a New Lift Truck? Part B. Specifying Design Requirements	Aug 7	56
Part A. Technical Considerations	May 15	97
Cabot Piping Systems		
Plastic Piping–What Can It Handle? What Does It Cost?	Dec 11	62
Campbell Soup Co.		
Assure Safety Valve Reliability by Proper Sizing and Checking	May 29	68
Campbell, Wyant and Cannon Foundry Co.		
Augered Piles Solve Difficult Site Problem	Oct 2	62
Carboline Co.		
Controlling Static Electricity With Conductive Flooring	July 24	72
Carpenter Technology Corp.		
Stainless Steel: Why–and How–It Corrodes	Jun 12	74
Champion Papers		
Scrubber Licks Tough Fume Problem	Jun 26	70
Commonwealth Oil Refining Co., Inc.		
How To Implement Plant Maintenance Planning	Sept 4	88
Community Systems Foundations		
How To Take the Confusion Out of Layout Planning	Apr 3	59
Consulting Engineers, Inc.		
Civil Engineering for the Plant Engineer–Masonry Construction	Jan 9	66
Curtis-Electro Lighting, Inc.		
Learning To Live With Class P Ballasts	Sept 18	66
Class P Ballasts–Watch Fixture Selection, Application	Apr 17	120
D		
Day and Zimmerman, Inc.		
Analyze Air Pollution at Its Source	Apr 17	114
Dietz Electric Co., Inc.		
How To Select Reduced Voltage Starters	Aug 21	58
Dravo Corp.		
Materials Handling Along Inland Waterways	Dec 11	59
E		
Edgcomb Steel Co.		
Engineered Warehouse Storage System Provides Quality, Quantity and Speed	Apr 17	144
Elgin Softener, Inc.		
Pretreatment Techniques for Conditioning Water	Jun 12	68
Save Water Dollars	Apr 3	64
Elstner and Associates		
Sound–When Is It NOISE?	Feb 20	56
The Elwell-Parker Electric Co.		
PM Programs Improve Industrial Truck Reliability	Feb 20	70
Eriez Magnetics		
MH Equipment Space Tight? Try Magnetic Conveying	Mar 6	80
F		
Fairchild Hiller Corp.		
Check These Guidelines for Balancing an Air System	Dec 25	40
Hiring a Mover? Give Him Good Specs To Meet	Nov 27	48
Vertical Modules Contribute to Low Cost Clean Room Installation	Feb 20	64
The Falk Corp.		
Tips for Selecting Worm Gear Drive Systems	Feb 20	66
Flick-Reedy Corp.		
Air-Oil Circuits Depend on Proper Design for Stroke Speed	Nov 13	71
Air and Oil Cylinders–Choice and Care are Key Factors	Oct 16	70
G		
General Dynamics		
Shot Blast Facility Cleans Large Bulky Shapes	Mar 6	78
General Dynamics Convair		
Plant Lighting Quadrupled at Low Cost	Mar 20	59
General Electric Co.		
Plant Protective Relay Maintenance	Sept 18	62
Need a Plant Engineering Building? Design It Yourself To Fit Your Function	July 24	54
Understanding Motor Temperature Ratings	Feb 6	68
General Motors Corp.		
The Effect of Solid State on Plant Engineering Philosophy	Jun 12	54
Giffels and Rossetti, Inc.		
Estimating Piping Costs	Sept 4	94
Goodall Rubber Co.		
To Get More Life from V-Belts–Don't Misapply, Neglect or Abuse Them	Oct 30	66
H		
Hercules, Inc.		
Maintenance Planning/Scheduling– Measuring the Results	Feb 6	57
Hoechst Pharmaceutical Co.		
Portable Units Provide Flexibility In Dust Collecting	Feb 6	56
Huber-Supreme Metal Treating Co.		
Wringing Out Quench Oil Rings Up Big Savings	Oct 30	74
I		
IBM		
Engineered Data Leads To: An Efficient Maintenance Control System	Dec 11	68
Don't Create Piping Problems– Choose Correct Insulation	Aug 7	66
ITT Bell & Gossett		
Curves Help Determine Operating Points for Pumps	Oct 16	64
Curves Help Choose Pumps for Parallel Operation	July 24	60
System Curve Matches Pump to Piping Layout	May 29	60
Avoid Heating Problems By Proper Positioning of Pumps	Apr 3	66
Industrial Engineering Institute, Inc.		
Lighting Interiors of Dockside Vehicles	Jun 26	60
Industrial First, Inc.		
Plant Doors Too Small? Install Machines Through Roof	Dec 25	50

	Issue Date	Page No.
Industrial Fasteners Institute		
Fasteners in Maintenance–		
Materials and Coatings	Nov 13	76
Causes of Failure	Aug 21	65
Special-Purpose Types	Jun 12	58
Standard Features	Apr 3	56
Identifying Characteristics	Mar 6	82
Industrial Services of America, Inc.		
Applications and Limitations of Waste Compactors	Mar 6	92
J		
Robert P. Jaffer, Inc.		
Should You Buy Main Power Transformers?	July 10	60
Johnson Bronze Co.		
Audit Measures Maintenance Performance	July 24	57
K		
Kaiser Aluminum and Chemical Corp.		
Guidelines for Planning a Bulk Handling System	Oct 16	59
Induction or Synchronous Motor? Selection Guide Helps Choose	Sept 4	90
Kaiser Engineers		
Calculating Pressure Drop for Hot Water Piping	Oct 30	62
How to Find Stress and Sag of Piping	May 1	65
Determining Speed of Gas Leakage	Apr 3	62
Air-Water Vapor Mixture Weight Handled by Steam Jet Ejector	Mar 6	85
Kamweld Products Co., Inc.		
Plastic Welding Techniques for Equipment Fabrication, Repair	Jan 23	60
Kirk & Blum Mfg. Co.		
Centrifugal Collectors–Design Characteristics, Applications	Mar 20	56
L		
LTV Aerospace Corp.		
Maintenance–A Gold Mine of Opportunity	Mar 20	68
M		
McCleery Engineering & Manufacturing Co., Inc.		
Adjustable Frequency Control Simplifies Synchronization	July 24	66
McDonnell Douglas Astronautics Co.		
Boost Fire Protection by Updating Equipment and Methods	Jun 12	64
M & T Chemicals, Inc.		
Corrosion–An Expensive "Enemy"	Jan 23	64
Martin Co.		
Coordinated Lubrication Assures Equipment Reliability	Jan 23	58
Martin Marietta Corp.		
Are You Writing Construction Contracts?	May 1	68
Streamlining Plant Sanitation Program– Boosts Cleanliness, Saves Money	Mar 20	70
H. B. Maynard & Co., Inc.		
Maintenance Management–		
Part III–Control	Jun 12	61
Part II–Work Measurement	May 15	103
Part I–Organization and Procedures	Apr 17	117
Introduction–Killing Maintenance Myths	Jan 9	70
Michael Reese Hospital		
NOISE and The Ear	May 1	54
The Mogul Corp.		
Coagulation–Applications and Limitations	Aug 21	68
Monsanto Co.		
Storing Bulk Materials? Design Ideas for Storage Tanks	July 24	69
Coupling Disconnect Method Speeds Alignment	Mar 6	86
N		
National Aviation Facilities Experimental Center		
PM Scheduling Without a Computer	May 1	59
Neistein, Richman and Hauslinger		
Legal Aspects of Noise Pollution	May 29	66
The New York Blower Co.		
Six-Point Guide for Installing Fan Bearings	July 24	63
Nipak, Inc.		
Determining the Capacities of Screw Conveyors	Dec 25	56
Determining Effective Cylinder Thrust	Nov 27	58
Finding Conveyor Angles of Incline	Oct 2	49
Pipe Blind Thickness Selection Guide	Sept 18	59
Sizing Power Requirements for Electric Lift Trucks	Aug 21	70
Calculating Cylinder Stroke Length	Aug 7	70
Sizing Fan Drives	July 24	74
Determining Air Densities	July 10	72
How To Control Belt Sag	Jun 26	63
Evaluate Blowdown Valve Reaction Force	Jan 23	57
North American Rockwell Corp.		
EDP–Streamlined PM Saves $200,000 Annually	Nov 27	56
P		
Parke, Davis & Co.		
Custom Lighting Cuts Glare– Brightens Working Areas	Dec 25	42
Deep Well Disposal May Not Be the Answer	Jan 9	72
Permutit Co.		
Comparing Water Treatment Costs	May 15	108
The Polymer Corp.		
Effective Distribution of PM Time	Aug 7	59
Praeger-Kavanagh-Waterbury		
Designing Industrial Plants To Resist Storm Damage	Oct 30	60
The Protectoseal Co.		
Safe Use of Flammables	Nov 13	62
Disposing of Flammable Wastes Safely	May 15	106
How To Handle and Store Flammable Liquids	Jan 23	68
Public Service Electric & Gas Co. of N.J.		
Plant Protective Relay Maintenance	Sept 18	62
R		
Albert Ramond & Associates		
Facilities Planning Techniques Replace "Guesstimates"	Dec 25	46
Rotek, Inc.		
Turntable Torque Control Responds to Bearing Friction	Oct 2	50
David Round & Son, Inc.		
How To Select Job Cranes	Nov 27	54
S		
Sandia Corp.		
Electrical Distribution at Sandia	May 1	50
Servicemaster Communications Systems, Inc.		
Selecting a Fire Alarm System	Jan 23	62
Sherwin Williams Co.		
Pump Drive Method Controls Flow, Saves $900 Annually	Dec 25	55
Sibley Machine & Foundry Corp.		
Moves Efficiently, No Loss in Production	Oct 16	52

	Issue Date	Page No.
Skil Corp.		
Plant Engineer Builds His Ideal Plant	Apr 17	110
Skinner Engineering Co.		
Properties of Airborne Pollutants	Dec 11	56
Handling Hot Effluent	Jun 26	57
Stanley Works, Inc.		
Matching Strapping Equipment to Needs of Job	Feb 6	60
Stone & Webster Engineering Corp.		
Select Flow Pattern Carefully When Sizing Heat Exchangers	Oct 16	56
Stresen-Reuter International		
Catalytic Incinerator Controls Hydrocarbons and Odors	Apr 17	142
T		
Technology Laboratories, Inc.		
Long-Span Roof Structure 'Broadens' Industry's Plants	Mar 20	64
Thatcher Glass Bottle Co.		
Standby Fuel Offers Three Cost-Saving Benefits	Jun 26	68
U		
Unimation Inc.		
Industrial Robots–		
Part B. Attachments and Safety Interlocks	Sept 18	68
Part A. Their Potential in Today's Plant Operations	July 10	57
Union Carbide Corp.		
Adsorption Control of Air Pollution	Dec 25	52
U. S. Borax & Chemical Corp.		
Special Coupling Performance Depends Upon Proper Selection	Sept 18	56
V		
Varian Associates		
Layout Drawing 'Package' Makes Updating Easy	Aug 21	56
W		
Western Electric Co.		
Power Blackout Prompts Review of Emergency Power System	Oct 16	74
Westinghouse Electric Corp.		
Do-It-Yourself Modification Adds Two Functions to Volt-Ohmmeter	Dec 25	38
How To Select the RIGHT Speed Reducer	July 10	54
Package Boilers and Load-Regulated Air Compressors Cut Costs of Utilities	Feb 6	62
Westinghouse Electric Corp., Switchgear Div.		
Controlling On-Site Generators With Static Voltage Regulators	Jan 9	56
Westinghouse Electric Corp., Low Voltage Breaker Div.		
Understanding and applying Molded Case Circuit Breakers–		
Part II. Applications and Equipment Options	Dec 11	66
Part I. Nomenclature and Operating Principles	Nov 27	50
Wolverine Tube Div.		
Spray Pond Cools Process Water– Changes Plant Appearance	Nov 27	53
Worthington Corp.		
Air Compressor Decisions: Single or Multiple, Grouped or Decentralized?	Jan 9	62

1968

	Issue Date	Page No.
A		
Abbott Laboratories		
How Instruments Measure Moisture in Solids	Nov 28	56
Pros and Cons ... Types of Instruments for Measuring the Density of Slurries	Feb 8	98
Acushnet Process Co.		
Urethane–Versatile Tool for In-Plant Service	Aug 22	62
Addressograph-Multigraph Corp.		
Drill-in-Place Fasteners Speed Equipment Installation	Jan 11	93
Aerojet General Corp.		
Guarding Employees' Eyesight	Nov 28	54
How Effective Are Plant Safety Rules?	Sept 19	108
Allis-Chalmers		
Precision Leveling Assures Machine Tool Accuracy	July 25	83
T-Slot Floor Rails Fabricated From Railroad Track Sections	Jun 13	124
D-C Actuating Mechanisms Improve Large Starter Operation	May 16	97
Selecting Low Voltage Breakers	May 2	96
Allis-Chalmers, General Products Div.		
Selecting Transformers for Secondary Unit Substations	Apr 4	78
Protect Incoming Substation Lines	Jan 11	86
All-Steel Equipment Co.		
Design Techniques for an Overhead Conveyor System	Sept 5	70
Overhauled Fire Alarm System Pinpoints Trouble Spots	Mar 7	108
American Chain & Cable Co.		
Guide to Selecting Crane Grabs and Lifting Devices	Mar 7	138
Anchor Brush Co.		
Integrated Control Method Conserves Process Water	Jan 25	108
Armstrong Cork Co.		
Remote Dictation System Increases Engineering Efficiency	Dec 12	88
The Armstrong Rubber Co.		
Training Lubricators.		
Part B–Visual Aids and Tests Ensure Good Results	Dec 26	46
Part A–Developing an Effective Program	Nov 28	48
The Austin Co.		
Construction Cost Estimating–		
Brick and Concrete Block	May 30	56
Structural Steel for One-Story Industrial Building	Jan 25	84
Austin Engineers Builders, Ltd.		
Laminar Flow Complex Provides Big Volume Service	Nov 14	134
Automatic Electric Co.		
Solving Communication Problems– This Plant Uses Six Methods	Apr 4	64
B		
Babcock & Wilcox Co.		
Designing Out Troublespots on Special Purpose Cranes	Apr 4	66

	Issue Date	Page No.
Bailey Meter Co.		
Determining Process Control Via the Building Block Method. Part A–Common System Elements	Dec 26	42
Barnes Engineering Co.		
Industrial Applications of Infrared Instruments	Sept 5	75
Baldwin-Lima-Hamilton Corp.		
Plant-Designed Welding Fixture Makes Circular Welds	May 16	90
Baran Gear & Transmission Supply, Inc.		
Modular Clutch-Brake System "Softens" Conveyor Line Starts and Stops	Sept 5	92
The Black & Decker Mfg. Co.		
Reduction of Thermal Stratification Permits Pond Water Re-Use	Oct 17	102
C		
Calumet & Hecla Corp.		
Water Management Program Cuts Cost by 30 Per Cent	Aug 8	112
Caradco, Inc.		
Lubrication on ADP Cuts Maintenance Costs	Feb 22	96
The Carpenter Steel Co.		
Preventing Intergranular Corrosion in Stainless Steel Welds	May 30	60
Caterpillar Tractor Co.		
Complete Waste Treatment System Designed for New Foundry	Apr 18	118
Celanese Fibers Co.		
How Dewpoint Affects Compressed Air Moisture	Jun 13	98
Chesebrough-Ponds, Inc.		
Vibration Solves Sticky Bin Problems	July 25	98
Chicago Bridge & Iron Co.		
Field Testing Rates Coatings for Water Tank Interiors	Feb 8	78
Clairex Electronics, Inc.		
Photo-Conductive Cell Solves Industrial Control Problems	Apr 4	97
Clark Control Div.		
Power Press Electrical Controls		
V–Accidental Stroke Considerations	Sept 5	86
IV–Power Press Clutch Controls	July 11	78
III–Stroking Control	Jun 13	110
II–Accessory Devices and Motors	May 16	72
I–Main and Master Control Panels	Apr 18	103
Clark Equipment Co.		
How Air Film Handling Devices Are Used in Industry	July 11	88
Air Film–The New Frontier in Materials Handling	May 2	93
Columbia Broadcasting System, Inc.		
Capital Project Evaluation	Apr 18	112
Conco, Inc.		
Stacker System Solves Two Problems–Storage and Production	Jan 25	96
Consolidated Electrodynamics Corp.		
Preventive-Corrective Maintenance Monitors Equipment Costs	May 16	75
Consulting Engineers, Inc.		
Civil Engineering for the Plant Engineer–Steel Construction	Aug 8	106
Copperweld Steel Co.		
Plant Engineers Design Their Own Office Building	Oct 17	88
Crouse-Hinds Co.		
Planning High Bay Lighting? Let Computer Design It	Feb 22	85
D		
Dean Products, Inc.		
Stay-at-Home Addition Simplifies Plant Expansion	Feb 8	92
John Deere, Planter Works		
Recording System Keeps Maintenance 'On Schedule'	Jan 11	100
A. B. Dick Co.		
Annual "Checkup" Keeps Water Storage Tank in Top Shape	May 16	100
E		
Ebco Manufacturing Co.		
Piping Layout Revised for Paint System in Record Time	Aug 22	68
Elgin Softener Inc.		
Save Water Dollars.		
Part B–An Ion Exchange Process and Regeneration	July 25	91
Part A–Techniques on Water Supply Treatment	July 11	73
F		
Fairchild Hiller Corp.		
Experience-Proven Technique to Guide R&D Facility Planning	Oct 3	54
Federal Pacific Electric Co.		
Understanding Fuse Classifications	Oct 17	86
Ferro Corp.		
Plant Engineered Heating-Cooling System Prevents Vessel Shock Damage	Nov 14	102
Ford Motor Co.		
Establishing a Workable Lubrication Program		
Part V–Communications	Oct 17	100
Part IV–Handling and Dispensing	Sept 19	106
Part III–Reducing Cost	July 11	92
Part II–Determining Schedules	Jun 13	105
Part I–Preliminary Steps	May 16	86
G		
Garlock, Inc.		
For Best Performance–Match Seals to Application	Dec 12	80
The Gates Rubber Co.		
Whipping the V-Belt Whipping Problem	Nov 14	104
General Electric Co.		
For Better Plant Lighting–Break With Tradition	May 2	110
Why Fuse HID Ballasts?	Mar 21	88
Giffels & Rossetti, Inc.		
Design Piping for Efficient Compressed Air System	Jan 25	86
The Goodyear Tire & Rubber Co.		
Design Changes Update Industrial Water Conservation System	Feb 22	88
H		
Havens Industries		
Reverse Osmosis Process	Dec 12	92
Helfman Air Conditioning Co.		
Cooling Design Benefits from Careful Load Estimating	July 25	94
Henderson Engineering Co.		
Drying Compressed Air? Take Your Choice of Methods	Jan 25	82
Hercules, Inc.		
Maintenance Planning/Scheduling–		
Building a Schedule	Dec 12	85
Key is ACTIVE Planning	Oct 31	77
Planner Selection and Training	Oct 3	70
Making a Survey, Selecting Planners	Sept 5	88
Preliminary Steps	July 25	72

	Issue Date	Page No.
Hinchman Co.		
Investigating Corrosion	Jun 27	64
Holophane Co., Inc.		
Let's Light Up the Dock Area	Jan 25	88
Honeywell, Inc.		
Service Headers Add Flexibility To Simplify Line Changes	Dec 12	100
Liquid Nitrogen Saves Plant Space	May 2	120
Hudson Pulp and Paper Corp.		
Maintenance Labor Standards CAN Be Established	Apr 4	87
I		
IBM Corp.		
Vapor Barriers Protect Thermal Insulation	Nov 28	46
Selecting Pipe Insulation for Cooling Systems	Oct 17	98
Avoid These Pitfalls When Setting Up Computerized Maintenance	May 2	101
Paint Sludge Drier Simplifies Booth Cleanup	Apr 4	92
No Pollution from Etchants Here	Jan 25	94
ITT Bell & Gossett		
Proper NPSH Protects Pumps	May 16	78
Illinois Dept. for Mental Health		
Maintenance Program Developed for Top Performance	Feb 8	81
Imperial-Eastman Corp.		
How To Avoid 10 Tubing Hazards	Feb 8	84
Indiana General Corp.		
Two Separate Recirculation Systems Cut Plant's Water Usage in Half	Feb 8	90
J		
S. C. Johnson & Son, Inc.		
Keeping Office Lighting Up To Date	Sept 19	90
Lighting Revamped at Minimum Cost–Maximum Benefits	Aug 8	86
K		
Kaiser Engineers		
Finding Moisture Content in Compressed Air	Nov 14	124
Determining Cooling Effect and Weight of Water Evaporated	Oct 17	96
A Dynamic Approach to Multi-Facility Master Planning	Sept 5	78
Matching Flow Meters to Plant Jobs	Aug 8	87
Chart Speeds Fan Selection	July 11	96
Sizing Fan Drives and Finding Air Densities	May 16	70
L		
Link-Belt Co.		
Two Separate Sewer Systems Control Water Pollution	Mar 21	80
Lockheed-Georgia Co.		
Employee Involvement: Key to Outstanding Safety Record	Aug 22	60
The Louis Allis Co.		
Specifying Motors–Standards vs Specials	Jun 27	68
Louisiana State University		
Value Engineering Can Reduce Maintenance Costs	Jan 25	110
Louisville Ladder Co.		
Ladder Control Program	Dec 26	39
Lufkin Foundry and Machine Co.		
Plant-Designed Positioner Simplifies Large Weldment Projects	Sept 19	100
M		
Marinette Marine Corp.		
High Bay Light Study Pointed to HPS Lamps	Oct 31	74
Masonite Corp.		
Incinerator Reduces Fire Hazards and Maintenance	May 30	59
Martin Marietta Corp.		
Maintenance Control Assures Instrument Reliability	Feb 22	80
The Mead Co.		
Keep Plant Steam Traps "On-Line"	July 11	90
Merck & Co.		
Planning a Professional Plant Housekeeping Program	Jun 13	113
Midland Industrial Finishes Co.		
Tailoring Firefighting Brigade to Meet Plant Needs	Oct 17	106
Plant-Wide Safety Committee Boosts Safety Record	Jan 11	104
Milton Bradley Co.		
Trouble-Free Plant Floor: Concrete Slab Without Mesh	Oct 31	82
Milwaukee Fire Dept.		
Can Your Plant Fire Defenses Meet Today's Abnormal Problems?	July 25	76
Modine Mfg. Co.		
How Modine Coordinates Pollution Control Program	Apr 4	100
Monsanto Co.		
Guide to Bolted Aluminum Alloy Connections	Dec 12	90
Built-Up Roofing's Challenge: New Concepts in Plant Design	Nov 14	98
Organic or Inorganic Zinc Rich? Match the Coating to Job	Sept 19	82
You CAN Paint Over Mill Scale With Inorganic Zinc-Rich Paint	Aug 22	58
To Pull Vacuum, Try Steam Jet Ejectors	Aug 8	109
Calculating V-Belt Lengths	July 11	82
Troubleshooting Belt Drive Problems	Jun 27	62
Get Top Performance from Your Belt Drives	May 16	84
Motorola, Inc.		
Conveyor Bridge Connects New Warehouse to Plant	Nov 14	110
Plating Room Floor Protected by Plastic Sheet	Oct 17	90
Compressed Air Study Leads To: Cleaner Air, Less Maintenance	Sept 5	84
N		
Nipak, Inc.		
Finding Compressor Volumetric Efficiency Values	Dec 26	38
Determining Compressor Volumetric Efficiency	Oct 3	74
Plot Gas Discharge Temperature	July 11	81
Sizing Heater Output and Condensate Loads	Jun 13	122
Calculating Bulk Conveyor Capacities	May 30	50
Finding Friction Loss for Round Ducts and Rectangular Equivalents	Jan 11	99
North American Utilities Construction Corp.		
Reduce Fuel Costs With Standby Equipment	Jan 25	104
North American Rockwell Corp.		
Portable Spray Booth Cuts Costs and Overspray	Dec 26	45
O		
The Ohmart Corp.		
How To Apply Nuclear Scales for Continuous Weighing	Mar 7	112
P		
Penco Products		
Save Space By Tailoring Locker Arrangements	May 2	108

	Issue Date	Page No.
The Permutit Co.		
Choosing Controls for Automatic Regeneration in Water Softeners	May 2	115
Pinkerton's, Inc.		
Internal Survey Spots Plant Security Problem Areas	Apr 4	82
Prager-Kavanagh-Waterbury		
Poor Sites Are Poor Risks–Check the Soil Before You Build	Sept 19	87
Purex Corp.		
Simplified Form Reports Construction Progress	Nov 14	132
Shortcuts for Figuring Pipe Friction Losses	Sept 19	102
Fluid Flow Affected by Various Energy Forms	July 25	80
Determining Hydrostatic Pressures In Pipes, Tubes and Tanks	Mar 7	99
R		
Albert Ramond and Associates, Inc.		
Work Sampling: Valuable Maintenance Management Aid	Sept 19	84
Raytheon Co.		
Study of Boiler Practices Leads to $60,000 Savings	May 2	104
Research-Cottrell, Inc.		
What To Watch for When Choosing Air Pollution Control Units	Apr 4	74
Revere Electric Mfg. Co.		
Match That HID Lamp–To Which Ballast?	Apr 18	122
Rexall Drug and Chemical Co.		
This Filter System Gives Air Ultra-Purity Treatment	Sept 19	92
Riker Laboratories Div.		
This Filter System Gives Air Ultra-Purity Treatment	Sept 19	92
Robbins & Myers Co.		
To Ventilate Right, Consider the Basics	Oct 3	65
Apply Air Flow Principles to Plant Ventilation Design	July 11	86
Rockwell Mfg. Co.		
Lubrication: Key to Plug Valve Maintenance	Mar 21	90
S		
Sarco Co.		
Avoid Coil Freezeups–Use Traps in Piping Hookup	Apr 4	84
Scott Paper Co.		
Maintenance Labor Standards CAN Be Established	Apr 4	87
Servicemaster Communications Systems, Inc.		
What Is Custom Sound Equalization?	Nov 14	122
Plant Applications of Video Display Systems	Oct 17	93
Sherwin-Williams Co.		
Bypass Conveyor Saves $29,000, Keeps Paint Moving During Construction	Aug 8	105
Construction by the Numbers: Warehouse Built in Four Phases	Jun 27	66
Master Plant Guides Expansion Program	Jun 13	102
Sinclair Refining Co.		
Preheating Fuel Oil Improves Combustion Efficiency	Oct 31	80
A. O. Smith Corp., Clark Control Div.		
Power Press Electrical Controls–		
Part V. Accidental Stroke Considerations	Sept 5	86
Part IV. Power Press Clutch Controls	July 11	78
Part III. Stroking Control	Jun 13	110
Part II. Accessory Devices and Motors	May 16	71
Part I. Main and Master Control Panels	Apr 18	103
Computer Printout Monitors Critical Path Network	May 2	111
Solidstate Controls, Inc.		
Applying Static Inverters	Dec 12	82
Southern Bell Telephone and Telegraph Co.		
Developing the Maintenance Supervisor as a Trainer	Jun 13	95
Planning–Key to Successful Maintenance Training	Apr 18	107
Developing a Training Philosophy	Mar 21	78
Sprague Electric Co.		
Three-Way Benefits from Prestressed Concrete Construction	Mar 7	105
The Stanley Works		
Doors Slowing Traffic? Consider Automatic Operation	July 25	86
Stewart-Warner Corp.		
Boiler Conversion Reduces Costs and Air Pollution	Mar 21	96
Switzer Brothers, Inc.		
Fume Scrubber Is Custom-Tailored to the Job	Sept 5	82
T		
The Thomas & Betts Co.		
Installing Aluminum Cable?	Sept 19	94
Timken Roller Bearing Co.		
Power Factor Study? Do It the Easy Way	Mar 21	72
Toro Manufacturing Co.		
Painting Your Plant? Do It Electrostatically	May 2	92
V		
Valparaiso University		
Study of Frequency Response in Control Systems	Jan 11	90
W		
Walter Kidde Constructors, Inc.		
Before Constructing New Plant, Answer These Six Questions	Jan 11	84
Weatherhead Co.		
Chlorine Destroys Cyanide Wastes–Ends Water Pollution	May 2	106
D. M. Weatherly Co.		
Visual Indexes: Guides to Contruction Answers	Oct 16	68
Western Electric Co., Inc.		
Training Builds Maintenance Crew	Aug 8	90
Maintenance Takes Advantage of Plant Vacation Shutdown	July 11	83
Plant-Engineered Control Ends Soot Blower Problem	Jun 13	116
"Cover the Quonsets" Project Modernizes Warehouse Facilities	Apr 4	58
Resilient Tile for Plant Floors? Western Electric Says 'Yes'	Mar 7	118
Modernizing Pump Pit Cabinet Stops Water ... Boosts Plant Fire Protection	Feb 22	94
Western Electric Research Center		
Solved: Cooling Tower Makeup Control Problems	Oct 3	68
Westinghouse Air Brake Co.		
Concrete Fill in Gutters Improves Roof Runoff, Drainage	Nov 28	51
Paint Booth Spray–Wet to Dry Saves Water, Time and Dollars	July 25	100
Westinghouse Electric Corp.		
Cable-Supported Inner Roof Lowers High Bay to Working Height	Dec 12	94
How Thyristor Crane Control Operates	Oct 31	93

	Issue Date	Page No.
Calculating RC for Relay Time Delay	Oct 3	58
Additional Floor Space Piggybacks on Existing Building	May 16	82
Whippany Paper Board Co.		
New Waste Water Process Doesn't Pollute Air	Jan 11	82
Whiting Corp.		
The Mechanics of Lifting a Load	Mar 21	74
Whiting Corp. Maintenance Geared to Vacation Shutdown	Mar 7	92
Overhead Crane Design and Selection	Feb 8	94
Y		
Yeomans Co.		
Choosing Aerators for Waste Water Treatment	May 16	92

AUTHOR INDEX 1972

	Issue Date	Page No.
A		
Achtermann, G. E.	Jan 27	38
Allphin, Willard	Jun 1	62
Anderson, E.	Nov 2	78
Anderson, H. E. B.	Oct 19	75
	Sept 21	87
	July 27	49
	May 18	79
	Jan 27	27
B		
Baker, Chester H.	Jan 27	40
Basaj, Leonard	Jun 15	91
Beatty, James	July 27	53
Beeton, P. E.	Jun 1	64
Betz, Gordon M.	Jun 29	66
	May 4	89
Birlingmair, D. H.	Nov 30	82
Bluhm, D. D.	Nov 30	82
Boyce, Harry L.	Nov 16	120
Boyer, Richard W.	Feb 10	70
Bradley, Harvey	Jun 29	57
Brennan, Dennis L.	July 27	56
	Jun 1	52
	May 18	83
	May 4	77
Brouwer, J.	Oct 19	100
Buckley, William H. Jr.	May 18	98
Burchard, Donald	Sept 21	91
Burton, Frank L.	Nov 2	75
C		
Caffrey, T.	Oct 19	79
Campbell, John	Jan 13	138
Carter, Robert C.	May 18	86
Chiagouris, George L.	Mar 23	82
	Jan 13	127
Clark, Stuart	July 27	64
	May 4	82
Conner, J. R.	Oct 19	88
Cross, Frank L. Jr.	July 13	86
Cunningham, Larry A.	Nov 30	74
	Nov 16	123
D		
Darrah, B. R.	July 27	66
	July 13	77
Diazsardina, M. J.	Oct 5	106
Doolin, John	Nov 16	128
Downey, Richard A.	Jun 29	62
	Jun 15	106
	Apr 20	84
	Apr 6	96
	Feb 10	82
	Jan 27	32
Dreksler, Moshe Y.	Sept 21	112
Duda, John	Sept 7	88
Dunn, Richard	Dec 14	82
		92
	Jun 15	83
		94
	Jun 1	60
	Apr 20	75
	Mar 9	69
	Feb 24	60
	Feb 10	65
E		
Ellul, Joseph M.	Jan 13	137
Elskes, W. C.	Sept 21	94

	Issue Date	Page No.
F		
Farnsworth, Dale M.	Feb 10	80
Fisher, R. W.	Nov 30	82
Foley, W. E.	July 27	62
Footlik, Irving	Dec 28	36
	Dec 14	120
	Nov 30	51
Footlik, Robert	Dec 28	36
	Dec 14	120
	Nov 30	51
Fouche, George	July 13	82
Frega, V.	July 27	66
	July 13	77
Fremont, George	Nov 2	59
	Sept 7	85
Fultz, David B.	Nov 2	90
G		
Gibson, H. B.	Mar 23	101
Gilbert, William	Sept 7	104
Grunert, K. A.	Mar 23	86
Gunnoe, George H. Jr.	May 4	80
H		
Haight, Alfred G.	Aug 10	72
Hammerstein, Fred J.	Apr 6	92
Harris, Michell D.	Jan 13	140
Helms, F. Parker	Jun 15	109
Henke, Al	July 13	96
Henrikson, Karl	Oct 5	104
Herbaty, F.	May 4	86
Hill, Robert B.	Aug 10	67
Hochheiser, Robert M.	Oct 5	90
Hodges, Robert C.	Jan 13	124
Hoffmann, Nelson M.	May 18	92
Holcombe, J. K.	Apr 20	93
	Mar 23	92
	Feb 24	64
Holland, Edward T.	Feb 10	74
Holub, Gary E.	Oct 5	86
Horn, Jack	Jan 27	34
Hushon, J. R.	May 18	105
I		
Iannone, Vincent A.	Nov 16	102
Imsande, Grant A.	Dec 28	44
Irvin, Daniel W.	Apr 20	86
J		
James, Edwin W.	Nov 16	104
Jones, Clarence	Apr 20	80
Jordan, James K.	Aug 24	66
	Feb 24	66
Joseph, James J.	Nov 30	68
	Nov 2	68
K		
Kalika, Peter	Mar 23	92
	Feb 24	64
Kane, Edward L. Jr.	Dec 14	114
Karcher, Carl	Aug 24	64
Keller, Claude E.	Mar 23	108
Kempf, Vern	Oct 19	82
	Oct 5	77
Kenney, Donald E.	Dec 28	50
Koerber, Arthur R.	Oct 19	86
	Sept 7	92
Krucke, William	Mar 9	66

	Issue Date	Page No.
L		
LaBahn, W. C.	Nov 2	78
Lehmkuhl, Herbert F.	Dec 28	38
	Dec 14	117
Lewis, Donald E.	May 18	95
Limon, Leonard	Mar 9	72
M		
McBain, Ian	Dec 28	31
	Dec 14	124
McCourt, Gerald M.	Feb 24	70
McCutcheon, Edward B.	Apr 6	84
Maas, Peggy A.	Sept 21	108
	Aug 10	61
MacDonnell, F.	Oct 19	100
MacLatchie, Robert	Apr 6	98
Muir, Arthur J.	Dec 28	42
N		
Newman, William M.	Feb 24	62
Nixon, T. H.	Jan 27	36
Numrich, W. F.	Aug 10	78
O		
Oliverson, R. L.	Nov 2	49
	Aug 24	51
	July 13	73
	Jun 1	47
	Mar 9	59
Olle, Lawrence T.	Jan 27	40
P		
Palko, Ed	Dec 28	26
	Oct 5	83
	Aug 24	56
	July 13	93
	Jun 29	45
	May 4	73
	Apr 6	79
	Mar 9	64
	Feb 24	55
Parks, D. H.	Nov 2	84
Perry, E. W. Jr.	Mar 23	101
Pettitt, Roland A.	July 13	98
	Apr 20	98
Plonchak, Morton	Feb 24	68
R		
Rabosky, Joseph G.	Jun 15	96
	May 4	84
Ramans, G. J.	Sept 21	116
Rathbone, D. Z.	Jun 15	88
Reason, John	Dec 28	34
	Oct 19	80
Reilly, Philip B.	May 18	88
Reisinger, Robert R.	Dec 28	46
	Mar 9	74
Retajczyk, T. F.	Aug 24	68
Richter, Gilbert L.	Jan 13	137
Riemer, Ronald E.	Sept 7	100
Robinson, R. C.	Nov 2	82
Rock, J. V.	Nov 2	84
Rosen, Kenneth M.	Nov 2	55
	Oct 5	94
S		
Salina, F. M.	Nov 30	76
Schloot, H. P.	Sept 21	98
Sisson, William	Dec 14	90
	Nov 16	118
	Nov 2	62
	Aug 10	70
	July 13	80
	Jun 29	60
	Jun 15	87
	Jun 1	58
	May 18	108
	Apr 20	79
	Apr 6	94
	Feb 10	69
	Jan 13	130
Smith, R. L. Jr.	July 27	58
Soderling, Carl	May 18	105
Spainhour, Claude E.	Sept 7	82
	Jun 29	51
Spector, Leo	Nov 30	47
	Sept 7	77
Spratt, T. J.	Aug 24	59
Steele, Alfred	Oct 19	97
	Aug 10	75
	Jun 29	54
	Feb 10	72
Stolberg, Ernest M.	Oct 5	101
	Jun 15	98
T		
Taft, G. L.	May 18	96
Tomlingson, P. B.	Dec 14	102
	Nov 2	64
	Oct 19	100
	Sept 21	110
	Jan 27	40
Tustin, Wayne	Apr 20	94
	Feb 10	76
V		
Verhein, D. H.	Feb 10	78
W		
Walls, Donald D.	Mar 23	88
Ward, A. G.	Nov 16	115
Warner, James L. Jr.	Jan 27	34
Weise, Gunter	Aug 24	61
Weiss, W. H.	May 18	110
Wiersma, Charles H.	Nov 16	107
Wilkinson, D. M.	Sept 21	94
Willingham, Andrew	Dec 14	100
Wolfe, Gene	Nov 30	64
Wu, Jack	Apr 6	87
Y		
Young, E. S.	Dec 14	128
Young, Truman P.	Jun 1	55
Z		
Zetchus, Bernard	Jan 13	121
Zigas, Arthur L.	Apr 20	82

1971

	Issue Date	Page No.
A		
Adams, Fran	Sept 16	138
Allphin, Willard	Jun 10	118
	Aug 5	72
Amerson, C. V.	Jun 11	98
Anderson, H. E. B.	Nov 11	81
	Sept 16	103
	July 22	51
	Jun 10	91
	Jan 7	34
Ankeny, H. C.	Jun 11	98
B		
Baker, Walter C.	Nov 11	94
Baronet, R. P.	Jan 21	72
Barr, Robert	Oct 14	108
Bawn, W. A.	Jan 21	82
Beach, Warren	Jan 21	70
Beeson, R. G.	Mar 18	70
	Mar 4	70
	Feb 18	76
Betz, Gordon M.	Oct 14	104
	May 27	54
	May 13	111
Bingham, K. E.	Jun 10	115
Bornstein, E.	July 8	60
	May 27	64
Bors, E. Daniel Jr.	Jun 10	107
Bower, Edward I.	Dec 9	76
Bowlen, Kennard L.	May 27	62
	May 13	100
Brehouse, Harold H.	Mar 4	100
Brouwer, John	Oct 14	95
Burchard, Don	Apr 1	43
Buttery, L. M.	Apr 15	63
C		
Campbell, John	Oct 14	100
Carver, John O. II	Jun 10	95
Chavie, W. V.	Sept 30	37
	Sept 16	136
	Aug 5	60
	Apr 29	55
Chermak, Michael A.	Feb 4	40
Chiagouris, George L.	Dec 23	42
	Oct 14	118
Clark, John A.	Feb 4	37
Clark, Stuart	Mar 4	108
Cicerchi, Ralph R.	Feb 4	48
Cooling, W. Colebrook	Nov 26	60
	Oct 28	50
	Oct 14	102
	Aug 19	60
	Aug 5	66
	July 22	56
Colli, Albert J.	Nov 11	96
Copening, James W.	Sept 30	42
D		
Dacquisto, John F.	Nov 11	88
Damiani, A. S.	Aug 19	54
DeVille, J. A.	Oct 14	116
	Jun 10	120
Drake, Charles E.	Feb 4	37
Drayton, W. E.	Oct 28	52
	July 22	68
Dunn, Richard L.	Dec 9	63
	Oct 14	91
	Aug 19	56
	Jun 24	45
	May 27	56
	Apr 15	59
	Feb 4	31
Dyke, R. M.	Dec 9	80
E		
Edwards, Frank R.	July 8	49
Einheuser, Lawrence F.	Apr 15	70
Estep, B. C.	Apr 29	48
	Apr 15	67
F		
Flesca, F. P.	Feb 18	78
Floros, James	Jun 24	53
	Mar 4	106
	Feb 4	46
	Jan 7	44
Fogel, Al	Sept 16	132
Fogarty, William A.	Feb 18	82
	Feb 18	82
Fonda, Anton F.	Sept 30	46
Foss, George E. Jr.	Apr 29	43
Frydenlund, Marvin M.	Oct 14	120
Fuchs, Sheldon J.	Jan 7	48
G		
Gill, Jack H.	Jun 24	62
Grogan, Paul J.	Oct 14	106
H		
Haines, S. A.	Mar 18	70
	Mar 4	110
	Feb 18	76
Halushka, Bohdan L.	Nov 26	62
Hammond, Robert G.	Sept 16	127
	Aug 19	51
Handley, John M.	Sept 16	120
Hansen, Robert	Aug 5	64
Heaney, P.J.	Mar 18	60
Hollowood, H. B.	Nov 11	85
Hosler, Ralph H.	Dec 9	82
	Nov 26	49
Houlehen, Robert J.	Aug 5	69
I		
Ingwerson, Donald N.	Nov 11	106
J		
Jones, Allen H.	Feb 18	71
	Jan 21	75
Jones, Clarence	Jan 21	84
Jordan, James K.	Sept 16	111
K		
Kalika, Peter W.	Mar 18	57
Kessel, W. A.	Jan 7	46
Koester, W. F.	Sept 30	40
Koop, John E.	Jun 24	60
Kreh, Lee C.	May 13	109
L		
Landisi, R. J.	Nov 26	55
Laubach, A. C.	July 8	60
	May 27	64
Lee, C. A.	Nov 27	81
Lichtenberger, Fred	Mar 18	66
Lowe, James J.	May 27	52
	May 13	94
	Mar 18	68
M		
McCart, Stanley O.	Sept 16	110
Malagrifa, Louis J.	July 22	59
Malkin, S. I.	Nov 11	103
Merrihew, H. W.	Mar 4	95

	Issue Date	Page No.
Merrill, William H.	Jan 7	41
Merritt, L.	Aug 19	64
Milam, David L.	Jan 21	80
Miller, E. L.	Apr 1	42
Monroe, H. K.	Mar 4	103
Mulligan, Thomas F.	Dec 23	48
N		
Nebolsine, Ross	Apr 29	46
Nourse, Daniel E.	July 22	70
	May 27	58
Nussbaum, Otto J.	Dec 9	72
O		
Oliverson, R. L.	Oct 28	39
	Sept 2	51
	July 8	45
Orchard, L. C.	Feb 4	44
Oumedian, Armen	July 8	58
P		
Palko, Ed	Dec 23	35
	Aug 19	47
	Jun 24	49
	Jun 10	98
	May 13	85
	Feb 18	65
Parker, P. H.	Feb 4	44
Pettitt, R. A.	Jun 10	115
Prince, Frank J.	Sept 16	127
	Aug 19	51
Procell, Charles	Jun 24	56
R		
Rabuck, Frank	Sept 30	38
Riley, Robert C. Jr.	Sept 16	116
Rice, S., Sr.	Jan 21	78
Ringquist, C. L.	Apr 1	33
Rowe, Gordon D.	Jan 21	68
Rowe, James W.	July 8	51
Ryan, J. D.	July 22	62
S		
Salina, Fred M.	Jun 24	54
Seebold, James G.	May 13	89
Sence, L. H.	Sept 2	72
	May 13	102
Severance, W. A.	Jun 10	104
Schmucker, W. A.	July 8	52
Schroering, John B.	Oct 28	44
Schwartz, Max	Sept 16	118
Shenoy, P. K.	Jun 24	58
Shutt, C. W.	Sept 2	64
Sisson, William	Sept 30	44
	Sept 16	114
	Sept 2	69
	Aug 5	62
	July 8	54
	Jun 10	110
	May 13	113
	Apr 1	46
	Feb 18	74
	Feb 4	36
Skubik, E. B.	Aug 5	55
	Jan 21	63
Smith, A. J.	Jun 10	102
Spector, Leo	Mar 4	98
Stanisa, Sylvester	Apr 1	38
Steele, Alfred	Nov 26	52
	Sept 16	130
Stolberg, E. M.	Dec 9	78
Strait, B. S.	Apr 29	48
	Apr 15	67
Summers, Garth E.	Jan 7	38
T		
Tanner, E. C.	Jun 10	100
Tomasko, Terrence W.	Nov 11	96
Tomlingson, Paul D.	Dec 23	39
	Oct 14	95
Treadway, B. R.	Feb 4	44
Trickler, C. Jack	Mar 18	62
Truslow, J. D.	Oct 14	115
U		
Udwin, Ellis	Oct 28	56
	Sept 30	49
V		
Vago, S. A.	Sept 2	55
	July 8	56
Van Court, D. P.	Oct 28	43
	Aug 19	62
W		
Weems, James W.	Sept 16	134
Weiby, Paul	July 22	66
Weiss, W. H.	Sept 16	107
Wilkinson, John J.	May 27	52
	May 13	94
	Mar 18	68
Willi, A. B.	Feb 4	42
Wills, J. George	Oct 28	58
Wilson, James W. III	Sept 2	66
Wright, Harry A.	Oct 14	98
Wu, Dr. Nesa	Nov 11	90
	Oct 26	54
Z		
Zahid, Abduz	Dec 23	46
	Oct 28	47
	Sept 2	60
Zetchus, Bernard	Dec 23	50

1970

	Issue Date	Page No.
A		
Aaron, Henry	Jun 11	102
Allphin, Willard	Oct 29	64
	Aug 6	66
	Jan 22	56
Anderson, H. E. B.	Oct 29	46
	Sept 17	87
	Feb 5	38
Anderson, Paul T.	Sept 17	114
	Aug 20	70
	July 9	56
B		
Baird, David	Feb 5	45
Baxter, Hal	Dec 10	78
Bennett, R. E.	Dec 10	76
Blake, R. T.	Oct 1	34
Blizzard, D. T.	Aug 6	60
Bowman, Dan	Feb 5	34
Brehouse, Harold H.	Nov 12	80
Brown, Martin M.	Oct 1	39
Buck, James C.	May 14	108

	Issue Date	Page No.
C		
Callahan, J. J.	May 14	100
Capek, Richard C.	Nov 12	88
Caplan, F.	Nov 12	78
	Apr 2	44
	Feb 19	86
	Feb 5	50
Celenza, G. J.	Apr 30	60
Chandler, W. Doyle	July 9	60
Chase, Gene	Nov 12	73
	Oct 1	44
	Aug 20	78
Christgau, Ronald V.	July 23	82
Cicerchi, Ralph R.	Nov 27	76
Clark, John	Oct 15	112
Comfort, Samuel	Oct 29	50
Conner, William T.	Sept 3	52
Connor, J. N.	Jun 25	87
Crawford, Gary N.	Apr 2	35
	Mar 19	61
Crossley, Walter C.	Jun 25	98
	Apr 16	95
Cunningham, Larry K.	Nov 12	76
D		
Damiani, A. S.	Dec 10	68
	Apr 12	28
	Mar 5	80
	Feb 5	40
Day, Robert V.	May 14	124
	Mar 5	76
Deutsch, William G.	Jan 8	59
Doyle, Carserlo	Dec 10	73
	Nov 12	70
Dunn, Richard L.	Nov 12	66
	May 14	96
	Feb 19	66
E		
Einheuser, Lawrence F.	May 14	102
Ellard, Paul R.	Jun 11	92
Ellrich, E. K.	May 14	110
F		
Ferguson, Jack L.	Sept 17	112
Finlayson, Thomas	July 9	62
Fortman, N. C.	Mar 19	76
Fuchs, Sheldon J.	Dec 24	54
G		
Gattis, Murrah C.	Apr 30	66
Gault, R. J.	Feb 5	48
Gehrke, James A.	Feb 19	80
Gendler, Samuel E.	Oct 1	36
Gill, James	Dec 24	50
Gilmore, Duncan	Sept 3	64
	Aug 6	57
Gruzdas, Kazys M. Sr.	Dec 24	52
H		
Handley, John M.	Mar 19	56
Hansen, Robert	Oct 1	47
	Jan 8	54
Harris, L.	May 14	116
Hawes, Randy	July 9	72
Heaney, E. K.	Oct 29	58
Heflin, Ronald D.	Mar 5	74
Helman, E. L.	Oct 29	58
Henderson, J. S.	Nov 27	84
	Sept 3	58
	Jun 11	94
Hickel, Walter J.	July 23	66
Hirtreiter, Arthur B.	Nov 27	78
	Oct 29	55
Horowitz, Joseph	Feb 19	76
Howell, J. G.	Sept 3	68
Hunt, M. P.	Apr 2	38
Hurt, M. L.	Mar 5	78
J		
Jacoby, Walter	Jun 11	86
Jaffer, Robert P.	Apr 30	57
James, Charlie	May 14	121
Johnson, C. C.	Oct 15	122
Jones, Clarence	Dec 24	58
K		
Kane, John M.	Sept 17	109
Kennedy, J. J.	Feb 19	83
Kiefer, Dr. H. J.	Apr 16	104
Kittner, Edwin H.	Jun 25	90
	Mar 5	68
Koester, William F.	Nov 27	70
	Aug 20	66
	Jun 25	94
	May 14	118
Koop, John E.	May 28	52
Kopetsky, Frank Jr.	Mar 19	70
Krok, Edward	May 14	113
L		
Lane, Jesse	Dec 10	70
Lau, George	Jan 8	56
Lawrence, T. G.	Jan 8	62
Leader, D. W.	Oct 29	60
	Oct 1	42
Leibfritz, Kurt W.	July 23	80
Levenson, Daniel	Apr 16	108
Lipton, C. W.	Oct 15	105
Lotz, William A.	Aug 6	62
M		
Mack, H. R.	Oct 15	122
Malinowski, Lester	Apr 30	64
Manning, Fred R.	Mar 19	67
Martin, K. A.	Oct 15	105
Merrill, William H.	Oct 15	102
Militello, P. G.	Mar 19	58
Minshall, Robert F.	Sept 17	103
Molnar, John	Mar 5	67
Monroe, E. F.	Oct 29	66
	Aug 20	76
Moody, John F.	July 9	66
Mulvey, John F.	May 28	50
N		
Nailen, R. L.	Aug 20	68
Neal, Gordon W.	July 23	70
Nelson, Robert C.	Apr 2	40
	Feb 19	72
Noe, D. J.	Nov 12	84
Nourse, Daniel E.	Jan 22	78
Nutter, Ray	May 28	60
O		
Oliverson, R. L.	Dec 10	62
	Oct 15	98
	Aug 20	62
	Aug 6	51
	Mar 5	51
	Jan 8	68
Otte, A. J.	May 14	116
P		
Palko, Ed	Nov 27	64

	Issue Date	Page No.
	Oct 1	30
	May 28	44
	Jan 22	52
Parlante, Robert	Apr 16	98
Phillips, Donald F.	May 28	54
	Apr 30	54
Prochaska, Robert O.	Mar 19	64
	Feb 19	70
R		
Radmore, R. R.	Jun 11	106
Ramsey, Melvin A.	Oct 15	114
	May 14	126
	Jan 22	69
Reddin, W. J.	July 23	86
	Jun 25	96
Roberson, James E.	Nov 27	84
Roberts, Stanley I.	Mar 19	72
Rohrer, K. L.	Dec 24	60
Rowton, E. E.	July 9	70
S		
Schellinger, Richard R., M.D.	Feb 19	88
Shick, Rex	Dec 10	80
	Sept 3	55
Schroering, John B.	Jan 8	65
Schwartz, Max	Sept 3	61
	Aug 20	82
	July 23	73
	Jun 25	92
	Jun 11	89
Scott, William	May 14	113
Sease, G. H.	Mar 5	78
Sence, L. H.	Oct 15	110
Shropshire, James S.	Aug 20	74
Sippola, A. I.	Nov 27	73
	Jan 22	72
Sisson, William	Dec 24	49
	Dec 10	72
	Nov 27	68
	Oct 29	62
	Sept 17	118
	Aug 6	64
	July 9	76
	Apr 16	102
	Apr 2	46
	Jan 22	76
Skinner, Charles F.	Jan 22	66
Skubik, E. B.	Mar 19	52
	Jan 8	50
Sledge, M. W.	July 23	78
Smith, Ronald A.	Apr 30	68
	Apr 16	92
Squires, R. R.	Dec 10	66
Stevens, Robley D.	Jun 11	84
T		
Taft, Gordon L.	Sept 17	103
Thompson, H. W.	Mar 5	70
	Feb 5	42
Toone, Donald E.	Oct 15	120
Twitchell, S. B.	Jun 11	100
V		
Vance, Rupert C.	July 23	84
Varga, S. I.	Apr 2	32
Vida, Ronald S.	Sept 17	106
W		
Wahl, E. A.	Nov 27	81
Walser, J. W. Jr.	May 14	105
Walsh, Daniel S.	July 23	76
Warner, O. S.	Oct 15	108
Wehrle, Armin A.	Nov 12	82
Weiss, W. H.	Aug 6	54
Wilkniss, R. R.	May 14	105
Worster, L. D.	Oct 29	52
Y		
Yount, Walter	May 28	57
Z		
Zetchus, Bernard	Apr 16	89
Zinz, Dr. Carl	July 9	62

1969

A		
Anderson, H. E. B.	Nov 13	66
	Sept 4	85
	Aug 21	53
	Jan 23	50
Annandale, J. Lance	Feb 6	56
Apte, S. S.	Nov 13	68
B		
Baird, David	Dec 11	62
Barlow, Donald O.	Nov 13	62
	May 15	106
	Jan 23	68
Beard, Chester S.	Mar 6	98
Bowman, Dan	Apr 17	122
	Feb 20	52
Brunozzi, James	Jun 26	68
Buck, J. C.	Feb 6	62
Buffington, Milton A.	Sept 18	56
Burkit, Donald J.	Feb 6	56
Burtch, Chauncey E.	Dec 11	59
Byrns, Robert F.	Nov 27	56
C		
Cameron, John F.	Aug 7	56
	May 15	97
Caplan, F.	Oct 30	62
	May 29	76
	May 1	65
	Apr 3	62
	Mar 6	85
	Jan 9	64
Carlson, G. F.	Oct 16	64
	July 24	60
	May 29	60
	Apr 3	66
Carsey, E. A.	Mar 20	56
Celenza, G. J.	Apr 17	114
Cipriani, Wilbert R.	May 29	72
Comley, W. D.	Oct 16	56
Coyle, Frank L.	Sept 18	62
D		
Dacquisto, John F.	Sept 4	90
Damiani, A. S.	Dec 25	40
	Nov 27	48
	Feb 20	64
Danielson, C. N.	Jan 9	72
Davey, R. C.	Dec 25	38
De Patie, Robert	Feb 6	60
Devaney, R. J.	Dec 25	46

	Issue Date	Page No.
Doggett, T. A.	Mar 6	78
Draxler, J. A.	Feb 20	70
Dundr, Joseph	Mar 20	64
Dworak, R.	Jan 9	56
E		
Einheuser, Lawrence F.	Sept 4	94
Elleman, James	Apr 17	131
Enneking, Joseph C.	Dec 25	52
Erickson, Larry	Mar 6	94
F		
Febles, Eduardo	Sept 4	88
Feldt, Ralph L.	July 24	72
Floros, James	Mar 6	80
Fronk, Edward A.	Nov 13	71
Frotman, N. C.	Nov 27	46
G		
Gariepy, Robert E.	Aug 21	58
Garrison, M. R.	Oct 2	52
Geller, Saul	May 1	68
Gerlitz, R. A.	Jan 9	59
Gittelson, Karl F.	May 1	59
Golber, Myron B.	May 1	62
Bonzalez, Pablo	Apr 3	59
Goodes, Raymond H.	Jun 12	54
Gray, Albert W.	Sept 4	98
	July 24	76
Grubb, Hugh P.	Mar 20	70
	Jan 23	58
H		
Hamm, Hans W.	Mar 6	112
Hauck, T. A.	Mar 6	94
Hawkins, Gerald	Jun 26	70
Helmers, Dr. Donald J.	Aug 21	62
	May 15	100
Henning, Donald S.	Jun 26	60
Herndon, Charles L.	Jun 26	54
Hoffman, T. T.	Feb 20	58
Hoffmann, Nelson M.	Oct 16	62
	Oct 2	56
	Sept 4	91
	Jun 12	66
	May 29	58
	Apr 17	126
Holmes, William S.	Mar 6	90
I		
Iffland, J. S. B.	Oct 30	60
J		
Jacoby, Walter	Oct 16	74
Jacobs, M. O.	Apr 3	59
Jaffer, Robert P.	July 10	60
James, A. D. H.	Nov 27	53
Jansen, Ralph	Mar 6	77
K		
Kaminsky, Stanley J.	Jan 23	60
Kantro, Robert L.	Oct 16	70
Kauffmann, Frank	Mar 20	62
Kiener, E. G.	Mar 20	59
Kindness, George H.	Apr 17	144
Knoer, C. E.	July 10	54
Koop, John E.	Aug 7	59
Kowalski, Len	Apr 17	110
Krewson, George C.	May 29	68
Krok, Edward	Sept 18	66
	Apr 17	120
Kurki, Lauri	Jun 26	64
L		
Lanier, R. L.	July 24	63
Lau, Orrin	Dec 25	50
Law, D. D.	Oct 2	54
Lawrence, Dr. James H.	Aug 21	62
	May 15	100
Lotz, William A.	Aug 7	66
Lyons, Angus L.	Oct 16	59
M		
McCart, Stanley O.	Apr 17	128
McGraw, D. D.	May 29	70
Mack, Harry R.	Mar 20	68
Marchlewski, A. J.	Oct 30	70
Martin, Hunt V.	May 29	63
Martin, K. E.	Feb 20	58
Meier, Harvey E.	Oct 30	74
Molnar, John	Mar 6	88
Moody, G. B.	July 24	69
Morrison, Barclay	Jun 12	74
Myles, K. W.	Feb 20	61
N		
Nelson, Carl A.	Mar 6	86
Nelson, Robert C.	Nov 13	58
Nourse, Daniel E.	Mar 20	54
O		
Oliverson, R. L.	Nov 13	54
	Oct 16	52
	Aug 7	54
	July 10	50
	Jan 9	52
P		
Pace, A. A.	Dec 25	42
Palkie, C. R.	Jan 23	64
Palko, Ed	Oct 30	54
	Oct 2	42
	May 15	65
	May 1	50
Parlante, R.	May 15	108
Pearce, P. L.	Dec 11	68
Perka, Edward J.	July 24	54
Prince, Frank J.	Aug 21	58
Pritts, Bradley A.	Oct 2	50
Q		
Quadrine, Anthony	Aug 7	50
R		
Ramsey, Melvin A.	Mar 20	74
Riccetti, Roy P.	Aug 21	56
Richard, Edward H.	Nov 27	54
Rivett, K. H.	Dec 25	46
Robrecht, W. G.	Jan 9	72
Rose, Gilbert W.	July 10	64
Rothman, S. Charles	Aug 7	60
	Feb 6	64
Row, George R.	July 10	70
Rowe, Thomas Q.	Feb 20	66
Royer, Norman W.	Mar 6	86
S		
Schmidt, Kenneth A.	Jun 12	68
	Apr 3	64
Schroering, John B.	Mar 6	92
Schubert, Charles R.	July 24	57
Schwartz, Max	Jan 9	66
Setright, James	Oct 30	66
Sherman, L. S.	Feb 6	68
Shoshan, Samuel	Sept 18	68
	July 10	57

	Issue Date	Page No.
Simonson, S. A.	Jan 23	72
Sisson, William	Dec 25	56
	Oct 2	49
	Sept 18	59
	Aug 21	70
	Aug 7	70
	July 24	74
	July 10	72
	Jun 26	63
	Jan 23	57
Skinner, Charles F.	Dec 11	56
	Jun 26	57
Skubik, E. B.	Jun 26	50
	Mar 20	50
Smith, Bart A.	May 1	56
Smith, Gordon W.	Feb 6	57
Snelling, Lt. A. W.	Jun 12	64
Stagliano, E. L.	Sept 18	62
Stay, M. J.	Dec 11	66
	Nov 27	50
Stiehl, Charles H.	Aug 7	56
	May 15	97
Stein, Dr. Laszlo	May 1	54
Stewart, J.	Dec 25	55
Stresen-Reuter, James	Apr 17	142
T		
Tauscher, Robert L.	July 24	66
Toprac, A. A.	Mar 20	64
Turner, G. E.	Jun 12	64
Twitchell, Stiles B.	Aug 21	68
V		
Vedder, William G.	Jan 9	62
Vondran, N. H.	Feb 6	62
W		
Walsh, Daniel S.	Oct 30	58
Ward, K. G.	Dec 11	68
Warsack, George L.	Jan 23	62
Wawrzyniak, J. L.	Aug 7	62
	Jan 23	66
Weaver, Paul E.	Apr 3	54
Wilkinson, John J.	Jun 12	61
	May 15	103
	Apr 17	117
	Jan 9	70
Wiss, John F.	Feb 20	56
Y		
Young, Harry A.	May 29	66
Young, Richard A.	Feb 6	50
Z		
Zayko, Robert E.	Oct 2	62

1968

A		
Aconsky, Sidney	Apr 4	97
Albin, Everett	Aug 22	68
Allard, Harold F.	Sept 19	84
Allphin, Willard	Nov 14	97
Anderson, H. E. B.	July 11	70
	Jan 11	78
Apacki, Charles	Nov 28	51
	July 25	100
B		
Bader, A. J.	Apr 18	118
Bauman, J. R.	Dec 12	88
Bell, W. J. Jr.	Feb 8	84
Bender, Norman	Feb 8	90
Berger, Lewis W.	Dec 26	39
Bertouille, R. W.	Dec 12	80
Betz, Gordon M.	July 11	83
	Jun 13	126
	May 20	66
Bielenberg, M. L.	Jun 27	77
Bishop, Vernon R.	Feb 22	85
Bley, James	May 2	111
Bombach, Otto	Sept 5	70
Bond, V. C.	Aug 8	90
Bowman, Dan	Jun 27	58
	May 16	94
Bradac, F. J.	Apr 4	64
Broadwell, Martin M.	Jun 13	95
	Apr 18	107
	Mar 21	78
Brunkala, Joseph R.	Sept 5	92
C		
Canavan, Edward J.	July 25	76
Caplan, F.	Nov 14	124
	Oct 17	96
	Aug 22	71
	Aug 8	87
	July 25	79
	July 11	96
	Jun 27	71
	May 16	70
	May 2	100
	Apr 18	110
	Apr 4	77
	Mar 21	77
	Jan 25	91
Carlson, A. B.	Jan 25	96
Carlson, G. F.	May 16	78
Carson, Bert	Apr 4	87
	Mar 7	132
Christofferson, D. W.	Feb 8	78
Coleman, F. S.	Oct 17	88
Cook, H. L. Jr.	Mar 7	112
Craig, Harold	Mar 7	108
Crawford, R. H.	Dec 26	45
D		
Damiani, A. S.	Oct 3	54
Danzer, Carl	Apr 4	100
Davey, Robert C.	Oct 3	58
De Angelis, C. E.	Jan 11	84
Delaney, W. B.	May 2	110
Derusha, Robert J.	Oct 31	74
Dileo, Frank	Jun 13	124
E		
Ehrlich, M. W.	Feb 8	92
Erber, Eric	Nov 14	134
Everett, Max	May 2	96
	Apr 4	78
	Jan 11	86
F		
Falk, Norman	Jan 25	88
Field, H. F.	Jun 13	113

	Issue Date	Page No.
G		
Gabor, Fred	Sept 19	102
	July 25	80
	Mar 7	99
Galluzzo, Joseph F.	Nov 28	56
	Feb 8	98
Gammiere, A. T.	May 2	106
Gattis, Murrah	Nov 14	132
Gehrke-Manning, Joachim E.	Sept 19	92
Gerlitz, R. A.	Dec 12	96
	Oct 3	65
	July 11	86
Gibson, Howard	Sept 19	94
Gilman, Allan W.	Oct 16	68
Gregory, S. O.	Feb 22	90
	Jan 25	102
Greiner, H. G.	Mar 21	74
	Feb 8	94
Guy, Donald B.	Dec 12	92
H		
Hall, W. O.	Nov 14	104
Hamilton, Robert B.	Jun 13	98
Hamm, Hans W.	Oct 3	64
Hartman, J. E.	Feb 22	96
Haynes, Charles D.	Aug 8	102
Heap, Dale A.	Aug 22	60
Heath, Charles C.	Apr 18	106
Helfman, Howard	July 25	94
Helmers, Donald J.	Nov 28	52
Henderson, Joseph	Jan 25	82
Herrick, Robert	July 25	98
Hilmer, Milton	Apr 4	84
Hoffmann, Nelson M.	Oct 17	100
	Sept 19	106
	July 11	92
	Jun 13	105
	May 16	86
Holland, Frank H.	Sept 5	86
	July 11	78
	Jun 13	110
	May 16	72
	Apr 18	103
Holscher, John N.	Dec 12	82
Horn, William	Jan 11	82
Horowitz, Joseph	Apr 18	112
Hughes, W. B.	Mar 21	88
Hummel, Harry	Jan 11	100
Hunter, Calvin	July 11	88
	May 2	93
I		
Iffland, J. S. B.	Sept 19	87
J		
Jacoby, Walter	Oct 3	68
	Jun 13	116
	Feb 22	94
Jansen, Ralph	Nov 28	42
	Oct 31	96
	Sept 5	66
	Jun 13	86
	Mar 7	96
Jasinski, A. J.	May 16	97
Jorgensen, George H.	May 2	101
Jud, Henry G.	Jan 11	90
Juelg, Edward	May 16	90
K		
Kacsur, Michael	Mar 21	72
Kaye, Henry	Feb 8	90
Keller, Gerald J.	Sept 19	90
	Aug 8	86
Killin, K. D.	Sept 5	78
Krolasik, C. C.	July 25	83
L		
Lauters, Vincent G.	Feb 8	81
Lawrence, James H.	Nov 28	52
Lawrence, T. G.	Dec 26	48
Leftwich, Richard F.	Sept 5	75
Looney, Jack	Apr 4	87
Loucks, Dr. Charles M.	Apr 4	61
	Mar 7	102
Lotz, William A.	Nov 28	46
	Oct 17	98
M		
McDonald, D. J.	Mar 21	90
Mailhos, J. E.	Mar 7	132
Malmgren, F. R.	May 16	100
Mann, Lawrence	Jan 25	110
Martinson, C. R.	Sept 19	82
	Aug 22	58
Maurer, L.	Jan 25	86
Medley, Richard C.	Apr 18	122
Meyer, J. J.	Nov 14	134
Mickowski, H. E.	July 25	83
Molnar, John	Dec 26	50
	Oct 31	84
	Aug 8	114
Moody, G. B.	Dec 12	90
Moore, W. W.	Apr 4	74
Morin, J. R.	May 2	92
Morrison, Barclay	May 30	60
Mueller, Harry A.	Oct 17	102
Murray, Robert A.	Dec 12	100
Mutty, Peter C.	May 2	104
Myers, Joseph C.	Mar 21	80
Myles, K. W.	May 30	56
	Jan 25	84
N		
Nailen, R. L.	Jun 27	68
Newton, Lowell	May 2	111
Nelson, Carl A.	July 11	82
	Jun 27	62
	May 16	84
Nugent, Howard E.	Apr 4	82
O		
Oestreicher, G. K.	Dec 12	94
Oliverson, R. L.	Oct 17	82
	Oct 3	61
	July 25	68
	Apr 18	90
	Mar 21	88
Ortman, John B.	Mar 7	105
P		
Pachko, D. L.	Nov 14	102
Palko, Ed	Dec 26	34
	Nov 14	94
	Oct 31	70
	Sept 19	78
	July 25	74
	July 11	76
	Jun 27	74
	Jun 13	90
	May 30	62
Palmer, J. D.	Jun 27	64
Pasco, Russell A.	Oct 17	86
Pennington, W. T.	Sept 19	100

	Issue Date	Page No.
Peters, D. E.	July 25	86
Peters, Ray	July 11	90
Petersen, J. G.	Oct 31	93
Prince, F. J.	May 16	97
R		
Reddin, W. J.	Feb 22	104
	Jan 25	99
Rees, R. J.	Mar 7	138
Ribbens, John C.	May 16	75
Rispoli, Fred	Jun 13	108
Roden, John	Aug 22	62
Roeber, John A.	May 16	92
Rothman, S. Charles	Aug 8	92
	Feb 8	101
Rowlands, E. W.	Jun 13	124
S		
Safford, D. E.	Oct 31	80
Schenkenberg, Paul	Oct 17	106
	Jan 11	104
Schmidt, Kenneth	July 25	91
	July 11	73
Schuster, Ray	Apr 18	97
Schwartz, Max	Aug 8	106
	Mar 21	82
	Feb 22	98
	Jan 11	94
Seidl, John E.	Feb 22	80
Semler, H. O.	May 16	82
Senges, D. C.	May 2	115
Sheehan, Ralph W.	Apr 4	92
Shumski, Eugene	Oct 31	82
Simmons, Howard	Jan 25	108
Sisler, C. W.	Nov 14	98
Sisson, William	Dec 26	38
	Nov 27	58
	Oct 3	74
	July 11	81
	Jun 13	122
	May 30	50
	Jan 11	99
Skubik, E. B.	Nov 14	90
	Aug 22	54
	May 2	86
Smith, B. A.	Aug 22	72
Smith, Gordon W.	Dec 12	85
	Oct 31	77
	Oct 3	70
	Sept 5	88
	July 25	72
Stewart, James	Aug 8	105
	Jun 27	66
	Jun 13	102
Stone, Robert N.	Apr 4	66
T		
Taylor, Paul	Aug 18	109
Techmer, Fred E.	Jan 25	92
Tracy, James E.	Aug 8	112
Truslow, J. D.	May 2	120
Turban, Efraim	Nov 14	106
V		
Van Court, D. P.	Mar 7	118
Vincent, M. D.	Oct 17	90
	Sept 5	84
Voelkerding, Henry A.	Sept 5	82
Vossler, John A.	Jan 25	94
W		
Walker, William P.	May 2	108
Wallin, William C.	Apr 4	58
Warner, Oliver S.	Dec 26	46
	Nov 28	48
Warsack, George L.	Nov 14	122
	Oct 17	93
Wastie, A. E.	Jan 25	104
Wawrzyniak, J. L.	Dec 26	42
Webb, R. W.	Sept 19	100
Weiss, B. L.	Jan 11	93
Weiss, W. H.	Feb 22	88
Wheeler, Paul G.	Feb 8	87
Winters, Robert	Nov 14	110
Wolnez, G. J.	Nov 28	54
	Sept 19	108
Wood, B. T.	May 30	59
Y		
Young, Richard	Nov 14	126
	Sept 5	72
Z		
Zabroske, Tony A.	Mar 21	96